



AIR UNIVERSITY

19991022 093

**A Historical View of
Air Policing Doctrine**
*Lessons from the British Experience
between the Wars, 1919-39*

MICHAEL A. LONGORIA, MAJOR, USAF
School of Advanced Airpower Studies

DISTRIBUTION STATEMENT A
Approved for Public Release
Distribution Unlimited



A Historical View of Air Policing Doctrine

Lessons from the British Experience between the Wars, 1919-39

MICHAEL A. LONGORIA, MAJOR, USAF
School of Advanced Airpower Studies

THESIS PRESENTED TO THE FACULTY OF
THE SCHOOL OF ADVANCED AIRPOWER STUDIES,
MAXWELL AIR FORCE BASE, ALABAMA, FOR COMPLETION OF
GRADUATION REQUIREMENTS, ACADEMIC YEAR 1992-93.

Air University Press
Maxwell Air Force Base, Alabama

June 1993

Preceding Page Blank

Disclaimer

Opinions, conclusions, and recommendations expressed or implied within are solely those of the author, and do not necessarily represent the views of Air University, the United States Air Force, the Department of Defense, or any other US government agency. Cleared for public release: distribution unlimited.

Contents

<i>Chapter</i>		<i>Page</i>
	DISCLAIMER	ii
	ABSTRACT	v
	ABOUT THE AUTHOR	vii
	ACKNOWLEDGMENTS	ix
1	INTRODUCTION	1
	Notes	5
2	THE ORIGIN OF BRITISH AIR POLICING	17
	Notes	11
3	TESTING AIR POLICING IN SOMALILAND	13
	Notes	18
4	AIR POLICING DEVELOPS AS MESOPOTAMIA BECOMES IRAQ	19
	Notes	23
5	ADEN: THE MATURE AIR POLICING CAMPAIGN	25
	Notes	28
6	A SUMMARY OF DOCTRINAL TENETS	31
	Notes	37
7	IMPLICATIONS: ASKING THE RIGHT QUESTIONS	39
	Notes	41

Abstract

This study reviews the historical accounts of the Royal Air Force (RAF) experiences in air policing during the interwar period, 1919-39. It analyzes the evidence from the view of operational doctrine and applies an in-depth look at the basic tenets of RAF air policing campaigns. It seeks to answer the question: To what doctrine did air commanders subscribe? It further analyzes the development of air policing tactical doctrine throughout the interwar period. It summarizes the conclusions and then offers this insight as it may apply to contemporary operations.

This study seeks to provide an insightful view of the British experience and attempts to explain what has never been explained before, namely "how" air policing worked from the vantage point of those who conducted it. By tracing the RAF operations during the more significant air policing examples and looking at the indigenous response, it describes the actual operational mechanism at work.

About the Author

Maj Michael A. Longoria (BS, United States Air Force [USAF] Academy; MA, University of North Colorado; MA, Naval War College) is a former combat control officer and a master parachutist with Combat Star. He graduated from the School of Advanced Airpower Studies, Maxwell Air Force Base (AFB), Alabama, and was assigned to the Pentagon, Strategy Division, Headquarters USAF/XO. Major Longoria is also a graduate of the Naval Command and Staff College, Naval War College, Newport, Rhode Island. Other assignments include operations officer of a special tactics and combat control squadron in the Air Force Special Operations Command; chief, Combat Analysis Division, and Special Operations War Planner, Headquarters Military Airlift Command; and chief, Combat Control Division Headquarters Twenty-third Air Force, Scott AFB, Illinois.

Acknowledgments

I have been fortunate enough to have friends who helped me with their experiences and advice and I have appreciated the many, long discussions where difficult points were presented, argued, presented again and reargued—continuous dialogue that I am sure Plato would have enjoyed. I am indebted to Dr. Harold Winton for his yearlong advice and counsel. Especially his persistence in always asking the tough questions at the right time with the perfect humor. Thank you to Lieutenant Colonel Pentland's watchful eye during the last minute trauma of final production.

In addition, I would like to acknowledge two officers who helped me in very specific ways. Maj Janet Therianos reviewed draft-after-draft and always provided keen insight as well as stylistic recommendations. Maj George Gagnon, at an early stage in the research, provided me with extensive bibliographic material within the Air University Library that was extremely valuable.

Chapter 1

Introduction

The great bomber can use weapons other than the hydrogen bomb, just as the policeman can discard his pistol for the truncheon.

J. C. Slessor

The concept of using airpower to maintain or produce civil order predates the 1992 installment of "no-fly" zones in Iraq.¹ The practice was initiated by the Royal Air Force (RAF) during the interwar period, 1919–39, and was referred to as "air policing." Air policing was one of the RAF's most important roles between the world wars.² Great Britain's use of airpower during the interwar period has a striking resemblance to that of the United States (US) today. In both cases aircraft were used for operations short of major wars and the air operations succeeded a major war. The British activity came at the heels of World War I and at the beginning of a general military demobilization. Fellow aircrews fighting a major regional war against the same enemy preceded American pilots flying watch in Iraq. These airmen face a similar "downsizing" that began prior to the start of Operation Desert Storm. These apparent similarities belie certain subtle, yet critical differences between the contemporary use of air policing in the context of no-fly zones and the British experience during the interwar period.³

Major distinctions are evident. Great Britain used airpower in some circumstances to replace or substitute for land forces; in some cases, ground campaigns had been conducted for decades before the use of airpower had even been considered.⁴ Today, it is just the opposite, the air option is often considered first.⁵ The introduction of ground forces is often a contentious issue.⁶ For the British, the question had been: Could airpower be as effective as ground power? The Air Ministry suggested that not only could airpower replace many ground commands but also it could significantly reduce costs. Today's question is whether or not the use of airpower is *enough* to do the job—or is something else required. In either case, the central focus is the use of airpower to bring about or to maintain civil order. The natural question, then, is whether the British experience can offer any useful lessons for today. This study seeks to answer the question: What were the operational tenets of the British air policing experience and what implications do they have for contemporary operations?

Work in this area has been mainly historical and has followed one of two tracks: the regional and the subject specific. David E. Omissi's important work, *Air Power and Colonial Control: The Royal Air Force 1919–1938*, follows the latter track and is the leading work in highlighting four often forgotten areas: indigenous response, the technical dimensions of air policing, politics, and the role of force. It was an important source for this work. Another significant, but less substantial work is Bruce Hoffman's

RAND Study, *British Air Power in Peripheral Conflict, 1919-1976*. This study presents an examination of the British use of airpower in a succession of small-scale conflicts between 1919 and 1976. It provides an excellent foundation for air policing doctrinal analysis. Philip Anthony Towle's, *Pilots and Rebels: The Use of Aircraft in Unconventional Warfare, 1918-1988*, was a valuable source. To the broader question of Imperial control, Maj Gen Sir Charles W. Gwynn's, *Imperial Policing*, provides a valuable typology. These works combined with regional historiographies provide an excellent foundation for analysis. They neglect, however, to distill systematically the core doctrinal elements of air policing operations, which is the main focus of this study.

This focus is warranted because of three problems that have plagued the study of air policing in the past. First, is the semantical distinction among the terms, *air policing*, *air control*, and *air substitution*. Accordingly, the second problem concerns the placement of air policing within a conceptual framework. Was it a strategy or a tactic? How was the term *air policing* used in the interwar period? The third problem concerns a confusion with air policing theory, doctrine, and practice. Consequently for this study, it is appropriate to review these issues and highlight the conceptual distinctions.

Some Initial Definitions

There are three terms that herald from the interwar period that could possibly be confused today. Omissi labels these terms: *air policing*, *air control*, and *air substitution*.⁷ *Air policing* means the use of aircraft to uphold the internal security of the state. Inherent in the definition is the notion of a "mandate" normally granted by a legal authority, such as a national sovereign government or an international body with some reasonable jurisdictional claim.⁸ *Air control* occurred when the Air Ministry assumed responsibility for the defense of a particular region of the empire.⁹ It has a significantly different meaning today, with air control possibly referring to some type of air traffic function such as the separation of aircraft within designated aerodromes. The word "control" in the interwar RAF terminology is synonymous with the contemporary notion of "command" today. *Air substitution* occurred when aircraft replaced other forms of military force in imperial defence. "The use of aircraft instead of ground troops to police a territory was one form of substitution, and the proposed use of bombers instead of heavy guns . . . would have been another."¹⁰ Another way to understand just how these terms can be interpreted is to place their use at the appropriate level of command, the Air Ministry, the theater air commander, or the squadron air commander. This distinction could be associated with the "levels of war" and addresses the problem of where to place air policing within the strategic-tactical framework.

The Definitions and the Three Levels of War

The framework that differentiates between the levels of war is a valuable tool in explaining Omissi's definitions. The common categories include the strategic, operational, and tactical levels. This work will focus primarily

on the operational-tactical level, noting that most secondary sources have given much attention to the strategic aspects of air policing and the economies of substituting air for ground forces. Matching the levels with the definitions may help in understanding the distinctions.

Strategical Level	Air Substitution Policy
Operational Level	Air Control Responsibility
Tactical Level	Air Policing Methods

The decision to substitute forces was always made at a higher level than the Air Ministry or War Office—normally the Prime Minister. Subsequently, the air control responsibility followed: when the Air Ministry had full charge of the overall mission the appointed air operational commander assumed the duties of the theater commander in chief.¹¹ Air control represented command authority. Naturally, the methods involved with air policing appropriately belong with those normally associated with the tactical level of war. This study focuses on the lower level tactical doctrines of the era. However, the definition of *air policing* doctrine is the third issue that must be clarified before proceeding.

Theory, Doctrine, and Practices: The Distinctions

One problem this research faced was separating well-established imperial policing doctrine from new air policing practices. Great Britain had been policing her colonies long before even the American Revolution. Imperial policing was certainly not new and as a result the nature of the army's police duties had a long history.¹² This is not to say that technology never disturbed that history because, in fact, many new technologies changed imperial policing throughout the past century.¹³ Technology had always been a cause for new doctrine.¹⁴ The advent of the steamship, quinine, and the machine gun were clear examples of paradigm shifts.¹⁵ With the use of aircraft in World War I, it is not unreasonable to assume that such a doctrinal change was occurring during the interwar period. The research problem is separating the new from the old and to do that some clear distinctions must be made between the following terms: *theory*, *doctrine*, *practice*, *tenet*, and *derived doctrine*. This study will hold to the following definitions.

- theory*: A set of ideas or concepts formulated in a manner that explains a particular phenomenon.
- doctrine*: The sanctioned, codified notions about the best way to conduct military activity.
- practice*: The common pattern of activity associated with a particular military mission. These may or may not be formal in the sense of regulation, but they are generally accepted as standard operating procedures—with or without sanction.
- tenet*: A distinct postulate about military affairs derived from practices across multiple conflict venues—they are building blocks for doctrine.

derived doctrine: A developmental stage where practices have been codified into tenets and the tenets have been combined into an informal doctrine, but the doctrine is not officially sanctioned. In other words, you may not find it in a war manual, but if you asked a field commander he could espouse it.

This study is particularly interested in the common air policing tenets during the long period in review. There are examples of formal doctrine in the various publications of air officers commanding in particular areas. There are other examples of derived doctrine from a host of professional journal articles. There are scores of practices documented in various command after-action reports and yet, there is no systematic description of air policing tenets as a whole. No study has done that yet, and this is the goal of this research. Now that we have clearly placed the context for this study, there is one other subject that deserves review: the policing environment. All policing activity did not occur under the same civil conditions and because the role of air policing was to support civil order, the next topic warrants attention.

Describing the Character of the Policing Environment

General Gwynn offers the best explanation of the actual policing environment between the wars. In his substantial work, *Imperial Policing*, Gwynn develops a useful descriptive mechanism for looking at policing activity, based on the status of civilian control existing in a particular domain of the British Empire, at a particular time. These categories of policing environments are summarized below.

- No Civil Control (small war)
- Restore Civil Control
- Maintain Civil Control

General Gwynn elaborates in the next three paragraphs:

In the first category are small wars: deliberate campaigns with a definite military objective, but undertaken with the ultimate object of establishing civil control. The conduct of such wars differs in no respect from defensive or punitive wars undertaken to check external aggression.

The second category . . . includes cases when normal civil control does not exist, or has broken down to such an extent that the Army becomes the main agent for the maintenance of or for the restoration of order. . . . More commonly, responsibility is shared between the two authorities in giving effect to measures required to restore control.

To the third category belong to those occasions when the civil power continues to exercise undivided control but finds the police forces on which it normally relies insufficient. In such cases the Army is employed "in aid of the civil power" and its responsibility goes little further than for the methods the troops adopt to give effect to the directions of the civil magistrate. In both these latter categories the Army is bound to exercise the minimum force required to attain their object.¹⁶

This research focuses primarily on the internal actions of imperial policing and therefore mainly deals with the second and third of Gwynn's categories.

Framework for Analysis

Three case studies will offer primary evidence for the research's conclusions. The same basic questions will be asked of the case-study evidence. First, what were the most current notions about air policing at the time of the activity? Where could they be found and how did they affect the planned operations? Second, what operations during the policing activity caused leaders to revise their thinking? How significant were the revisions? If there were no major revisions, did the operation further support the original notions? Third, what was the nature of the doctrine? Was it formal doctrine or informally derived doctrine? Each case study will conclude with a summary hypothesis that will flow from answers to the above questions and which will include an evaluation of success or failure.

Study Organization

Chapter 2 sets the stage for the study by briefly describing Great Britain's strategic position after the Great War and outlines the "origin" of air policing. Chapters 3, 4, and 5, are case studies that analyze air policing in greater detail. The lessons of Somaliland, Iraq, and Aden will be analyzed using the framework above. Each chapter's hypothesis will summarize the intermediate doctrinal notions. Each case study will begin with a strategic overview of the particular region and a synopsis of the particular context for air policing. Chapter 6 synthesizes the hypotheses from the case studies and concludes by proposing air policing tenets of the RAF experience. Chapter 7 suggests ways in which the air policing tenets may have contemporary applicability.

Notes

1. A general reference to Operation Provide Comfort in Northern Iraq, and a reference to Operation Southern Watch in Southern Iraq; in both operations the maintenance of no-fly zones represents one of the principal military tasks.

2. David E. Omissi, *Airpower and Colonial Control: The Royal Air Force 1919-1939* (Manchester, UK: Manchester University Press, 1990), ix.

3. This study looks exclusively at the British experience. During this same period the Italian, Spanish, and German governments used airpower in a similar fashion, namely to police colonial territories. This study does not compare the relative doctrinal tenets but a comparative study would be a welcomed addition to the existing literature.

4. Flight Lt F. A. Skoulding, "With 'Z' Unit in Somaliland," *The Royal Air Force Quarterly* 2, no. 3 (July 1931): 387. The Skoulding article refers only to those land campaigns conducted in Somaliland since 1899. One of the leading original textbooks on small wars is Col Charles E. Callwell's, *Small Wars: A Tactical Textbook for Imperial Soldiers* (Novato, Calif.: Presidio Press, 1990). First Edition was published in 1896. Callwell divided this form of warfare into three groups: campaigns of conquest or annexation; campaigns for the suppression of insurrection or lawlessness, or for the settlement of conquered or annexed territory; and campaigns undertaken to wipe out an insult, to avenge a wrong, or to overthrow a dangerous enemy.

5. Consider the proposed (hostile) options for the conflict in the former Yugoslavia: Air interdiction was first. The commitment of ground units is currently a hotly debated topic. Humanitarian airlift operations have proceeded along with the maintenance of a no-fly zone without much public debate.

6. The commitment of ground troops is not an easy bureaucratic task. Ground forces represent a commitment of presence and blood. It was only after the Gulf of Tonkin Resolution did the United States commit ground-fighting forces to Vietnam. The size of the force and the lead time involved almost always necessitates approval by Congress under the War Powers Act. Ground commitment is significantly more complicated than air involvement.

7. Omissi, xv.

8. Ibid.

9. Ibid.

10. Ibid.

11. Sir John C. Slessor, *The Central Blue: Recollections and Reflections* (London: Cassell and Co., 1956), 52.

12. Colonel Callwell traces the British Army experiences from the Napoleonic era through the Boer Wars and describes the long history associated with police duties in the empire.

13. Omissi, 3.

14. Martin van Creveld, *Technology and War: From 2000 B.C. to the Present* (New York: MacMillan and Co., 1989). The premise on which the book was written.

15. Omissi, 3. Omissi cites two works by Daniel R. Headrick, *The Tools of Empire* and *The Tentacles of Progress* (New York: Oxford University Press, 1990). This study does not review this original material, but assumes the accuracy of the Omissi interpretation. Headrick identified two main tools of British penetration into various parts of the world—the steamship and quinine. One helped them to get there and the other helped them to survive. The machine gun helped to defeat enemy tribes, of particular note was the Hiram Maxim (1884), the first automatic weapon powered solely by the force of its own recoil.

16. Charles W. Gwynn, *Imperial Policing* (London: MacMillan and Co., 1936), 2–4.

Chapter 2

The Origin of British Air Policing

For Great Britain, the origin of their air policing efforts clearly demonstrates that necessity is the mother of invention. The invention was air control, and its necessity was driven by the national requirement to reduce military spending. For Sir Winston Churchill, serving both as the War and Air Minister, it was required to meet the new commitments agreed to at Versailles. For Lord Hugh M. Trenchard, serving as chief of the Air Staff, it gave his new RAF an important peacetime role, allowing him to stave off bureaucratic attempts by the War Office and the Admiralty to subvert the independence of the newly created RAF. Churchill's necessity was the function of two tensions. On one hand, Great Britain was demobilizing the military forces called on during the Great War. On the other, the postwar settlements were giving Great Britain new responsibilities in the Middle East and Africa.¹

Feeling the same demobilization pressure, Trenchard tested air policing in Somaliland in 1919. He would later use the test to offer the notion of air substitution as a solution to Great Britain's financial and political dilemmas. A key bureaucratic fight ensued between the RAF and the other services. The Cairo Conference in 1921 decided in favor of air control in Iraq (Mesopotamia) as a substitution for the Imperial Army.² Air policing was later employed in many different regions, but the origin of air policing would always owe part of its existence to Great Britain's strategic position at the time.

Churchill's Predicament

Britain's strategic position after the Great War was far worse than it had been before the war.³ The responsibilities of Imperial governance increased considerably after 1919, but the means of sustainment declined in both absolute and relative terms. The tension between domestic and external priorities emerged as soon as the war ended because peacetime did not bring a requisite reduction in commitments. Instead, Britain faced ever increasing political and military responsibilities. In addition to pre-war Imperial garrisons around the world, new acquisitions were made in the Middle East, and as early as 1918 there were still British troops in France, Belgium, Germany, Italy, Greece, Austria, Hungary, Serbia, Bulgaria, the Ottoman Empire, and Soviet Union.⁴ In absolute terms, the chief of the Imperial General Staff, Sir Henry Wilson had over three and one-half million men at his disposal in 1918, but the public outcry for demobilization would soon diminish that force structure.⁵

Demobilization after the Great War

The funding of the British Defense Forces was radically reduced within a period of 10 months. In 1919 the level was about £604 million; a year

later the level had dropped off to £292 million. In the succeeding year, the level fell to £110 million.⁶ The rapidly declining budget caused severe force reductions. The three and one-half million man force in 1918 was 800,000 in 1919; and by 1920 the figure stood at about 370,000.⁷ In just 23 months the British military structure had been reduced by at least a factor of 89 percent. The army was most affected by the cuts because of its manpower intensive structure but the RAF experienced severe reductions of its own.

The RAF ended the 1914–18 war as a formidable fighting force, with 95 squadrons on the continent, 55 operational and 199 training squadrons in the United Kingdom, and 34 more in the Middle East and India.⁸ By the beginning of April 1919, however, the number of squadrons on the continent had dwindled to 44; and at the end of October there was only one.⁹ The wholesale decimation of the RAF was evident by January 1920, at which time the total personnel strength of the service stood at 29,730 officers and men. A little over a year earlier, the figure had been 304,000.¹⁰ In a matter of months, the Aircraft Disposal Company Limited, formed under government authority, had disposed of material amounting to £5.7 million, including over 10,000 aircraft and 30,000 engines.¹¹ By March 1920, the order of battle of the RAF had been reduced to eight squadrons in India, seven in the Middle East, and one at home.¹²

The inevitability of demobilization seemed to rest upon two commonly held notions at the time. The first were the views of the war-weary British public, which was undeniably attracted to the seductive view that the last war had been the “war to end all wars.”¹³ At any other time in Great Britain’s history this kind of public cry might not have been heeded. After 1918 the United Kingdom had begun a transformation towards extended franchise that moved the great monarchy of the eighteenth and nineteenth centuries to an almost ideal state of fully representative parliamentary democracy.¹⁴ The people’s voice was heard so loudly in fact, that one of the most significant constraints on policy makers was the fear at the end of the war of social upheaval in Great Britain. Indeed, Keith Jeffery argues that the fears about this outcry did not really subside until about 1921.¹⁵ Before that, widespread industrial unrest seemed to threaten the country with actual revolution. These fears lingered and continued to trouble the government until after the general strike of 1926.¹⁶ British leadership could not help but accommodate the popular will of the people.

A second point concerns finance in general. The war had one direct and substantial economic impact on Great Britain—it turned her from a creditor nation into a debtor nation within the span of four years.¹⁷ The only apparent solution at the time was to cut spending as drastically as possible. Large military forces were looked upon as unnecessary. The sacrifices of an already war-weary population consumed the thoughts of policy makers invoking even a consistent cry from the likes of David Lloyd George, often quoted as saying, “the first act of statesmanship was to provide a fit country for heroes to live in.”¹⁸ For Churchill, as both War and Air Minister, fiscal realities and rapid demobilization were double factors that substantially shaped policy.

Commitments: The Upward Spiral

The armistice and peace accords ending the Great War did not bring the peace Britons desired. As devastating as it had been, it was not the war to end all wars. As the war concluded, Britain faced a difficult security problem. Internal and external forces acted upon her with great intensity and helped mold certain foreign policy decisions. Unfortunately, the end of formal hostilities with Germany did not end hostilities. The Russian Civil War required a British presence; unreconciled conflict between Greeks and Turks, as well as boundary disputes among eastern European nations caused additional concern. The fall of the great Ottoman Empire made Britain consider the question: What should replace Turkish rule in the Arab lands? The Middle East and Mesopotamia in particular posed questions with long histories for the British.¹⁹ The postwar period brought these questions to the forefront along with the requisite notion that strategic decisions had to be made. But the Arab and Middle East questions had been alive as early as 1915 and in an Admiralty memorandum, "Alexandretta and Mesopotamia," the time for some final decisions were near even during the initial stages of the war. "As has been our constant habit in building up the Empire, we have in this case hung back reluctantly for nearly a century from the increasing burden of our destiny. We have hung back, as we always did, till it is no longer possible with safety to avoid that destiny . . . everything points to such another moment being at hand."²⁰

This general attitude eventually led to greater British Imperial responsibility. The basis for that responsibility was formalized at Versailles. In all for Great Britain, the postwar commitments were a significant increase from their prewar position.

The ultimate question in the Lloyd George government was how to do more with less. Strategic necessity drove Churchill to consider air substitution as well as it drove Lord Trenchard to supply the concept of air control. This new strategy would significantly reduce expenditures, while at the same time provide a mechanism for effective Imperial control over vast quarrelsome territories. There was a clear requirement and the challenge was how to meet it given the fiscal constraints imposed by rapid demobilization. The Lloyd George government was desperate for a solution to this requirement-resources mismatch.

Lord Trenchard's Invention

Trenchard's answer was air control. The RAF scheme appears to make its debut in 1919, even though there is substantial evidence that Trenchard did not even ascribe to the notion of an independent air force in 1918.²¹ On 1 April, the auspicious date for the birth of the RAF, he told Field Marshal Sir Douglas H. Haig that airpower alone could not win the war. He resigned nine days later as a result of a disagreement with Lord H. Sidney Harmsworth Rothermere over the strategic versus the tactical role of airpower on the Western Front.²² Later Trenchard sided with army commanders in opposing independent bombing operations.²³ This created tensions between himself and the new Air Minister, Viscount William Wier. This was certainly an inauspicious beginning for the person who holds the

title "Father of the RAF." Recognizing the difference between war on the Western Front and tribal lands, Trenchard apparently makes a conversion. The mutation is evident in terms of the independent role of air control.

By 1919 Trenchard was extolling the virtues of an idea that was only conceptual. The exact genesis of the air control idea is unclear. It might have been the suggestive power of Lord Milner or Winston Churchill; it could have been a watered-down version of strategic bombing in World War I; or it could have been Trenchard's own epiphany. But regardless of its true origin, Trenchard was quick to adopt it and give it a full discourse into the strategic notions of the RAF.²⁴ He suffered the slings and arrows of the Admiralty and the War Office over the concept that airpower could somehow substitute for ground and naval power. But Trenchard argued that airpower was not merely auxiliary; instead, it should most often be the primary force used. This question of policing the empire using airpower became resolutely entangled with the growth of the RAF during the early twenties.²⁵

The Third Afghan War

The first air substitution came in 1916, long before the eruption of the Third Afghan War in 1919.²⁶ North-West Frontier deployments had been steadily shrinking since 1915 as Indian reserves fought in France and at Gallipoli. In a two-year span the frontier troop strength shrank from over six divisions to less than eight battalions.²⁷ In their place armored cars and aircraft appeared in growing numbers up to 1917. The border area was generally quiet until 1919 when the Afghan army moved south from Kabul and the massacre at Amritsar initiated the war.²⁸ Air raids were immediately directed at Afghan army strongholds at Dakka and Jahalabad. These attacks were generally effective in disrupting Afghan troops, but had no lasting effects. Airpower was seen as purely auxiliary. But later in May 1919, the RAF had one Handley Page V.1500 bomber that attacked the Afghan capital of Kabul. The total ordnance delivered was four 112-pound bombs along with sixteen 20-pound bombs.²⁹ This single action was a watershed event for the Air Ministry. Gen Sir Charles Munro, commander in chief of India, believed that this raid was an important factor in producing a desire for peace.³⁰ Trenchard would use it time and time again as proof of the capability of independent airpower.

The Bureaucratic Wars

The air attacks against the Afghan city of Kabul and against the Frontier tribesmen in 1919 and early 1920, became a divisive issue between the War Office and the Air Ministry. The most contentious aspect of the debate centered on the notion of substitution—could air control work alone? Trenchard argued that it could and Field Marshal Sir Henry Wilson argued that airpower should serve the needs of local army commanders. The most urgent problem facing the War Office at the beginning of 1919 was the demobilization crisis. The pressure on the army was only compounded when the notion of substitution arose. The RAF eventually used air control in Somaliland, Iraq, Aden, Palestine, the North-West

Frontier, and other distant areas. It was used in areas closer to home such as Northern Ireland, but still the bureaucratic fights continued throughout the twenties.

John Slessor aptly sums up the period by commenting on his admired friend and leader—Lord Trenchard. "Trenchard as C.A.S. was a master of interdepartmental tactics and there were only two occasions on which I think his judgment was at fault in this respect—when he was betrayed by his enthusiasm and the force of his vision into action which in fact ill-served his perfectly sound purpose. Both these occasions had to do with what became known as 'Substitution'—the substitution of air-power for the traditional methods of force upon the ground. Substitution became a highly controversial subject and led to no little unproductive bickering, which undeniably marred to some extent inter-Service relations in the years between the wars."³¹

Air policing, air control, and air substitution were undeniably caught up in the bureaucratic struggles among the services. Although each is different, they did all represent airpower's encroachment upon the more traditional forms of Imperial policing. The origin of air policing is inextricably linked to both of Great Britain's external and internal struggles of the period.

Notes

1. David Fromkin, *A Peace to End All Peace: Creating the Modern Middle East 1914-1922* (New York: Henry Holt and Co., 1989), 17 and 455. Even though the responsibilities were officially new per Versailles, Fromkin argues that Britain's desires in the Middle East preceded the war. It was a big chess game played out between the Soviet Union and Britain in the northern regions and between France and Britain to the south and west. "It was an era in which Middle Eastern countries and frontiers were fabricated in Europe. . . . British inventions . . . and the lines drawn on the map by British politicians." There was also the strategic issue represented by the Curzon view that there should be a nexus of Moslem states to ward off Soviet expansionism.

2. C. G. Grey, *A History of the Air Ministry* (London: George Allen and Unwin, 1940), 181. Grey suggests that it was Sir Samuel Hoare that persuaded Cabinet officers like Sir Winston Churchill to believe in air control for Mesopotamia. But the ultimate decision was made at the Cairo Conference per Aaron S. Klieman, *Foundations of British Policy in the Arab World: Cairo Conference 1921* (Baltimore, Md.: Johns Hopkins Press, 1970), 111. Additionally, Trenchard knew that the independence of the RAF as a separate service would depend upon its ability to demonstrate the efficiency of the independent application of airpower—a concept not proven out in World War I. This was the basic argument of Barry D. Powers, *Strategy Without Slide-Rule: British Air Strategy 1914-1939* (New York: Holmes and Meier Publishers, 1976), chap. 6.

3. Keith Jeffery, *The British Army and the Crisis of Empire 1918-22* (Manchester, U.K.: Manchester University Press, 1984), 11.

4. *Ibid.*, 12.

5. *Ibid.*, 13.

6. Anthony Clayton, *The British Empire as a Superpower 1919-39* (Athens, Ga.: University of Georgia Press, 1986), 17.

7. Jeffery, 11.

8. Robert Jackson, *The RAF in Action: From Flanders to the Falklands* (Dorset, England: Blandford Press, 1985), 18.

9. *Ibid.*, 19.

10. *Ibid.*

11. *Ibid.*

12. Ibid.
13. Clayton, 18. The officially formulated policy (Clayton cites) was that of the "Ten Year Rule," first drafted in August 1919, by which the Cabinet forecast that "the British Empire will not be engaged in any great war in the next ten years." Consequently there should be no need for an expeditionary Army.
14. Jeffery, 12.
15. Ibid.
16. Ibid., 13.
17. Ibid., 12.
18. Ibid.
19. Fromkin, 146-49. The de Bunsen Committee was an interdepartmental group that Asquith created to advise the Cabinet; they outlined Britain's goals in the Middle East and made a report on 30 June 1915. According to Sir Mark Sykes the whole of the Middle East was to be shared by France, the Soviet Union, and Great Britain. Turkey would cease to be and Mesopotamia would be British.
20. Max Beloff, *Imperial Sunset, Volume I: Britain's Liberal Empire 1897-1921* (New York: Alfred A. Knopf, 1970), 258.
21. Robin Higham, *The Military Intellectuals in Britain: 1918-1939* (Westport, Conn.: Greenwood Press, 1981), 175.
22. Ibid., 165.
23. Ibid., 166. Winston Churchill replaced Sykes with Trenchard as chief of the Air Staff under the Air Minister Wier—this was the second time that Trenchard would hold the position.
24. H. M. Trenchard, "Air Staff Memorandum on the World Situation, May 1920," CMD Paper 1467, commonly known as the "Trenchard White Paper" in Cabinet Office and Records, Public Record Office 24, Kew, London, document correspondence, file no. 107.
25. David E. Omissi, *Airpower and Colonial Control: The Royal Air Force 1919-1939* (Manchester, UK: Manchester University Press, 1990), 7.
26. Omissi, 10. Sir John Slessor, *The Central Blue: Recollections and Reflections* (London: Cassell and Co., 1956), 50-56.
27. Ibid., 11.
28. Charles W. Gwynn, *Imperial Policing* (London: MacMillan and Co., 1936), 34. Gwynn describes the accounts of General Dyer's fateful decision to open fire upon the recalcitrant citizens of Amritsar.
29. Omissi, 11.
30. Ibid.
31. Slessor, 51.

Chapter 3

Testing Air Policing in Somaliland

The 1920 air control campaign in Somaliland was a significant turning point in the history of Imperial policing. It was the first time airpower rather than land forces was used in a primary role. Lord Hugh Trenchard seized an opportunity and used the Somaliland experience as proof that airpower could substitute for ground power, and could do so at a significantly reduced cost.¹ Yet, along with air control's uniqueness came the realization that the doctrinal precepts guiding airpower's use were not necessarily revolutionary. As is often the case with activities on the margin of change, there was a part that was old and there was a part that was new. Accordingly, the questions associated with doctrine have a particular relevance. What were the most current notions of doctrine at the time of the campaign? How was the campaign an agent for change and how did the change manifest itself? But before answering these questions, it is necessary to review the history of British involvement in the area.

Background

The 1920 air campaign was the final chapter in the Dervish uprisings which had begun at the turn of the century at the fanatical behest of Sayyid Muhammad 'Abdille Hassan.² For Great Britain it had been a conflict waged beyond the practical costs of her secondary interests. Somaliland was somewhat important because it supplied Aden with beef, and Aden was more important because it was on the short route to India.³ But for the Dervish, it ended the life of the man responsible for their movement.⁴ The Dervish viewed 'Abdille Hassan as a holy savior of sorts, but to the British, he was affectionately known as the "Mad Mullah." The British campaigns against 'Abdille Hassan extend from 1899 and the Dervish insurgence to his death in 1920.

The clash between the Christian and Muslim faiths appears to be the root of the problem. 'Abdille Hassan belonged to the Salihya Orders that had a messianic mission to restore to the Somalis an extreme devotion in the Muslim faith.⁵ This brought him into conflict with both the British and his fellow countrymen who followed the established Qadiriya Order. 'Abdille Hassan believed that Christian colonization had sought to destroy his people's Muslim faith. "This fired his patriotism and he intensified his efforts to win support for the Salihya, preaching in the mosques and streets that his country was in danger, and urging his compatriots to remove the English 'infidels' and their missionaries."⁶ After preaching this message around the countryside, Hassan began to accumulate a following. Sometime after April 1899, he commanded a force of over five thousand men.⁷ Subsequently, he declared a *jihad* against the British and Ethiopians. His followers became known as the "Dervishes." The term *dervish* described the acceptance of the Salihya Orders.⁸ I. M. Lewis in *A Modern History of Somalia*, has aptly narrowed the window of origin even

further. "On 1 September 1899, the British Consul-General for the coast received a letter from the Sayyid accusing the British of oppressing Islam and denouncing those who obeyed or co-operated with the Administration as liars and slanderers. The letter also contained the challenge: 'Now choose for yourselves. If you want war, we accept it; but if you want peace, pay the fine.' The Consul-General replied by proclaiming Sayyid Muhammad a rebel, and urged his government in London to prepare an expedition against the Dervishes. Thus the opening moves in the long-drawn out conflict were completed."⁹

For 20 years British soldiers chased, fought, and blockaded the Mullah's religious infantry across the mountains and plains between the British and Italian "Somali" Protectorates and Ethiopia. These campaigns cost Great Britain a great deal in financial resources and were moderately costly in human lives. The four land campaigns against the Mullah from 1900-05 accounted for over four hundred British deaths and more than one thousand Levies deaths at a cost of over £3 million.¹⁰ The story does not, however, end in 1905. Intermittent periods of peace and reconciliation were marred by successive land campaigns against the Mullah for the 15 years that followed, and it was not until the 1920 air campaign that the Dervish insurgency finally came to an end.¹¹

The Campaigns against Sayyid Muhammad 'Abdille Hassan

The punitive land expeditions from 1900 to 1905 against 'Abdille Hassan, each failed to achieve a decisive result. Cumulatively, however, they resulted in a "peace accord" that gradually withered away into further conflict by 1908.¹² The first of these land campaigns began on 22 May 1901 under the command of Lt Col E. J. E. Swayne.¹³ A British expeditionary force consisting mainly of Somali Levies set out from Burao to bring the Mad Mullah to justice. Towards the end of the campaign, however, the mixed British force was ambushed and over one hundred friendlyes were killed.¹⁴ Colonel Swayne soon gave up his pursuit and returned to Burao. The campaign had succeeded only in temporarily pushing the Mullah out of British territory.¹⁵

Maj Gen Sir Charles Egerton commanded the second campaign and the stakes were raised. His expedition grew from fifteen hundred to seven thousand men.¹⁶ The chase continued with numerous engagements. In one battle fought at Jid Ali more than one thousand Dervishes were killed compared to only 58 British losses.¹⁷ But in another engagement the Dervishes ambushed the British at Gumburu Hill and sustained only minor casualties against 198 British losses.¹⁸ There was still no decisive result since the Mullah habitually took refuge outside Somali territory. More campaigns followed with the same result. The pattern for the campaigns remained consistent throughout the period and remarkably it was true for the 1920 Somaliland air control campaign as well.

An Old Doctrinal Basis

The Somaliland air campaign is an important landmark because it takes place on the margin of change. Two reasons support this preliminary conclusion. First, the doctrinal basis for the Somaliland air cam-

paing can be found in the land campaigns that preceded it, and secondly the uniqueness of the new air weapon caused air planners to consider new types of problems from both a deployment and an employment perspective. Something old and something new—the pattern appears to remain the same even though the “weapon” changes.

Punitive land campaigns followed a rather logical sequence of events. They each had a similar pattern that began with an exigency; some event caused the government to want action against an alleged perpetrator. Next, depending on the significance of the grievous act, an expedition was organized and launched with the expressed mission of bringing the perpetrator to justice. The political call for help followed. Next, the organizing of a campaign began and military plans were set in motion: the deployment. The chase began upon arrival in the territory and proceeded in the pursuit of the perpetrator. Time passed and depending on numerous circumstances, the campaign would come to some kind of close. The planning assumptions for the 1920 Somaliland air campaign are consistent with the established pattern.

In 1919 the Cabinet decided to try the new air arm. Group Capt R. Gordon was placed in command and he immediately set about organizing for deployment.¹⁹ The planning assumptions were for a six-month expedition as a self-contained operation. The greatest care was also given to secrecy. Captain Gordon named the unit by symbol primarily for the secrecy requirement and thus the designation “Z” unit was given to the force.²⁰ In the early deployment stages, it is clear that there was really little difference between the use of air or ground forces. There were some notable exceptions owing to the uniqueness of the airplane. For example, there was no standard way of deploying aircraft at the time, consequently, everything had to be thought out and implemented with no base of experience. Replacement parts, fuels, lubricants, ammunition, tools, living facilities, medical supplies, food, and water storage—all of it and more, some 800 tons worth—had to be packed on the Her Majesty's Ship, *Ark Royal*.²¹ But in general, this differed little from the deployment requirements of ground expeditions.

Employment Considerations

The air campaign began in earnest on 21 January 1920 with the attack of six aircraft on the Mullah's “command” locations at Jid Ali Fort and Medishi Fort. “The first raid almost finished the war, as it was afterwards learned that a bomb dropped on Medishi Fort killed one of the amirs who supported Sayyid at the time, and the mullah's own clothing was singed.”²² Subsequently, more air raids were conducted during the two days that followed until an air reconnaissance aircraft reported the encampment areas were completely deserted. After this first phase, the Somaliland Field Force, consisting of detachments from the King's African Rifles, the Somaliland Camel Corps, and the 101st Grenadiers (Indian army) set about to chase the Mullah. Air force operations turned into support for the army, which consisted largely of keeping in touch with the various detachments, message dropping, and the conveying of dispatches between maneuvering elements. The field force soon occupied the Jid Ali

Fort area and learned that the Mullah was heading south toward his stronghold at Tale. Both the field force and air force pursued. An advance air base was moved to El Afweina; and on 31 January the Mullah's caravan was located and bombed from the air.²³ Air bombing was then directed at the Tale Fort as the field force closed in. "The intention at this stage was to allow the ground forces to close in on Tale after further bombing attacks. The latter, however, were rendered unnecessary, as the friendlies intercepted the mullah's convoy and rushed and captured Tale, while the Camel Corps, in a magnificent pursuit, caught and destroyed the mullah's personal following which had escaped the fortress."²⁴

The operations had been termed a success even though the Mullah had escaped across the border because his prestige was destroyed. The operations soon concluded, and all aircraft moved from their forward locations back to Berbera. The field force only temporarily held the Tale Fort region, since the Mullah had gone there was no cause for a continued presence. The Mullah fled south and settled in Imi where he eventually died of influenza. From this chain of operational events, it is clear that aircraft were used to conduct the same kind of chase operations that were consistent in most land campaigns. Indeed, in many instances bombing was delayed due to the wait for occupation forces. Ground campaigns were sequentially focused on occupation areas. This was certainly true for Somaliland as well. The campaign was obviously a cooperative measure between air and ground forces. In the debate that followed, each force would see in Somaliland what it wanted to see.²⁵ Air Marshal Sir John Salmond argued that the actions of the ground troops were invaluable but subsidiary to the bombing campaign. Henry Rawlinson, commander in chief of India, pointed out that independent air action had lasted just a few days and considered the ground pursuit the most important aspect of the overall campaign. An analysis of the tactical lessons of the campaign may help in sorting out what was old from what was new.

The Cause for Revision

Accepting the fact that the Somaliland air campaign looked like a land campaign, there was a great deal learned about employing the new air weapon. The primary lesson of the campaign was that deep and persistent attack of a warring tribe created significant operational advantages. The bombing of Fort Jid Ali started a chain of events that led to a successful occupation of the area as well as a more effective chase of the perpetrator. The air campaign started the ball rolling. In the past, ground forces would first have to maneuver into position and begin an engagement before the enemy was required to react; bombing changed that paradigm. Unfortunately, the official codification of this new lesson would be wrapped up in the bureaucratic struggles between the War Office and the Air Ministry, resulting in an often exaggerated view of the facts. One of the most representative analyses of the time comes from John Slessor's accounts of the difference between the two methods of dealing with campaigning. It adopts the more exaggerated view of Somaliland. "Now, when the situation reaches a point where it can no longer be handled by political or police action, there are only two alternative methods of dealing with

it, which I shall call the Ground Method and the Air Method. . . . The Ground Method is that traditionally employed by the Army for many years and was indeed the only one in the days before the aeroplane. It involves the invasion by a column on the ground, a battle with the enemy's fighting men and the occupation, sometimes permanent but more often temporary, of his territory."²⁶

Slessor's view of the Ground Method specifically addresses the form of punitive land campaigns, but it neglects to discuss the cooperative measures between land and air forces in joint operations. Naturally, the correct explanation of the Dervish defeat in Somaliland is reasonably somewhere in between those ideas put forth by the Air Ministry and the War Office. Air attack and cooperation were vitally important, as was the occupation, although temporary, of the Mullah's many strongholds. However, the more subtle lessons are equally important. One of the more critical issues was the manner in which the political dialogue between the governorship and the warring tribe was effected by air. Leaflet drops and personal visits were the key ingredients in creating this new dialogue. "The deepest impression was made on the local chiefs by the fact that the Governor of Somaliland was able to visit them and speak to them at the conclusion of the operations, forty-eight hours after the fall of the Mullah's stronghold. He accomplished the journey from Berbera—300—miles by air in one day."²⁷

Arguably, the most significant impact of the Somaliland air campaign was an acknowledgment of airpower's ability to deliver an effective but minimum use of force. The ability to reach deep into a tribes' garrisons and deliver a controlled amount of force and the capacity to improve the dialogue of the governor with the various tribesman by air leaflet drops and direct visits is perhaps the cardinal insight of 1920. Future air policing development would indeed be touched by this crucial lesson.

Summary Hypothesis

Deep attack is proven out by the bombing of Jid Ali; and in large measure it validates the bombing lesson of Kabul, Afghanistan in 1919. It demonstrated that the airplane could strike beyond the geographical barriers of distance, mountains, deserts, and other various landmasses even though early technology only allowed for about a 185-mile combat radius. Cooperation with ground forces was crucial in the overall campaign. If not for the effective occupation of the key Mullah strongholds, the air attacks might have had to bomb more to get the same results. Independent air action was not solely proven out in Somaliland. The subtle lessons from Somaliland were more important in the development of air policing tactical doctrine.

Airpower's inherent flexibility was discovered by enabling the governor to continue political dialogue during hostile actions. Leaflet drops and personal visits to the warring tribes proved an invaluable part of airpower's capability. From the first deep attack by DH 9As on Fort Jid Ali to the cooperative missions with the Somali Camel Corps, the origin of air policing tactical doctrine began in Somaliland.

Notes

1. The Somaliland experience was a contentious issue between the War Office and the Air Ministry. There is a lot of circumstantial evidence that H. M. Trenchard used Somaliland as the basis for his arguments for air control to Sir Winston Churchill prior to the Cairo Conference in 1921, especially the cost calculations. Too much may be made of the RAF effort there, however, John C. Slessor does not even mention Somaliland in his accounting of the period in *The Central Blue*. The author agrees with David E. Omissi in saying that I. M. Lewis offers the most balanced view of the period. Somaliland is used in this study not because of its significant "proving of airpower," but instead because it offers a clear historical landmark upon which to base a doctrinal evaluation.
2. David E. Omissi, *Airpower and Colonial Conflict: The Royal Air Force 1919-1939* (Manchester, UK: Manchester University Press, 1990), 16.
3. I. M. Lewis, *A Modern History of Somalia: Nation and State in the Horn of Africa* (London: Longman Group, 1980), 40.
4. The term *Dervish* is used to describe Sayyid Muhammad 'Abdille Hassan's following—The Salihiya Orders of Islam.
5. Lewis, 66.
6. Ibid., 67.
7. Ibid., 69.
8. Ibid., 70.
9. Ibid.; I. M. Lewis cites D. Jardine, "The Mad Mullah of Somaliland," *African Society Journal*, vol. 208 (July 1920), 70.
10. Extrapolated from I. M. Lewis, 63-91.
11. Ibid., 80. Flight Lt F. A. Skoulding, "With 'Z' Unit in Somaliland," *The Royal Air Force Quarterly* 2, no. 3 (July 1931): 396. This is the article's basic conclusion and is subject to the previous arguments against the notion that airpower alone had accomplished the task. The Mullah was not killed by air action. After a handful of near misses, the Mullah fled the country and wandered about for nine months finally settling in Imi on the upper reaches of the Sabelle River in Ethiopia. According to I. M. Lewis, 'Abdille Hassan died December 1920 at the age of 56 from a case of influenza. The Dervish insurgency lost its leader and no successor immediately followed.
12. Lewis, 72.
13. Ibid.
14. Skoulding, 387.
15. Ibid.
16. Ibid.
17. Ibid.
18. Lewis, 72.
19. Skoulding, 388.
20. Ibid., 390.
21. Ibid.
22. Ibid., 392.
23. Ibid., 393.
24. Ibid.
25. Omissi, 15. Omissi argues that the wider significance of the campaign was a matter for dispute between the services.
26. John C. Slessor, *The Central Blue: Recollections and Reflections* (London: Cassell and Co., 1956), 59.
27. Group Capt J. A. Chamier, "The Use of the Air Force in Replacing Military Garrisons," *The Journal of the Royal United Service Institution* 66, no. 462 (May 1921): 212.

Chapter 4

Air Policing Develops as Mesopotamia Becomes Iraq

There are many competing theories as to why Britain involved herself in Iraq after the war. David Omissi argues that Britain had two primary motives for keeping watch there: oil and as a bridge across the Middle East.¹ Keith Jeffery argues that British postwar policy in the region was largely determined by an Anglo-French declaration during the war which provided allied assistance to the Arabs.² Lord Kitchener had feared that a vacuum in the area would provide an opportunity for a Russian presence disadvantageous to Great Britain. There are others that felt that the Arabs just could not handle the responsibility of governing themselves right away. David Fromkin offers a more complex view of British motivation based on Imperial growth, decline, and competition with other European powers.³ But the formal commitment to Mesopotamia was at Versailles.

A Royal Air Force training document on the area suggested that, "The story of British relations with Iraq after the war of 1914-18 is the story of a two-fold experiment—an experiment in civil administration and in military Control."⁴ The military experiment was in the adoption of air control for the region and the substitution of air for ground forces. Rapid demobilization and the subsequent fight for financial resources had made Mesopotamia an unwanted requirement. Consequently, the RAF would be required to police the new Iraq with the air control scheme and would be directly involved in the area during the interwar period.

The Air Ministry's "Iraq Command Reports" offer a valuable analysis into the research questions. Formal doctrine is expressed by the summaries at the end of each command report. Iraq was the RAF's biggest challenge of the twenties and is an appropriate case study in tactical doctrine analysis for two reasons. First, the area of operations included three separate fronts or areas of concern. Consequently, the operations in each area had their own unique circumstances. Second, Britain and the RAF stayed engaged in the area throughout the interwar period, and as such, doctrinal development is easily tracked in successive command reports.

Air Vice Marshal Sir John Salmond became the commander in chief of all British forces in Iraq in October 1922. There were three trouble areas that immediately received attention and would remain at the forefront for the 16 years of air control that was to follow. A border clash with Turkey in the north, troublesome chieftains in Kurdistan, and unruly desert tribes in Southern Iraq along with raiders from Nejd kept the RAF almost continuously engaged.

Military Operations on Three Fronts

In 1922 the border clash between Iraq and Turkey heated up over the Mosul controversy.⁵ In September, the Turks had crossed into what the

allied powers had agreed in Paris was part of Iraq—the Mosul Province. Imperial troops were defending the area, but were having a rough time of it when the RAF began attacking Turkish outposts in November 1922. The bombing intensified in December, and in February 1923 a combined air-ground campaign effectively ejected the last remaining Turkish forces from the area.⁶ Only one other Turkish attempt was made in 1924 and it was summarily defeated by the RAF. Diplomatic efforts after 1926 resolved the issue in favor of Iraq keeping the Mosul area.⁷ The frontier border between Turkey and Iraq was no longer in dispute. There were, however, far greater challenges to overcome.

Kurdistan was a compelling problem because of the Kurds' unique culture and language. This distinction was so evident that the allied powers had even considered allowing Kurdistan to become an autonomous state at the end of World War I. The measure was later dismissed because the Kurdish territorial homeland encompassed parts of Iraq, Turkey, and Persia.⁸ The source of the agitation in the area was directly attributable to the dismissal of the idea to form a separate Kurdish state. Sheikh Mahmud was the leader of the initial insurrection in a place called Sulaimaniya; about 150 miles northeast of Baghdad.⁹ The Sheikh was an instigator of the first order. During the 16 years the RAF was responsible for RAF air control missions in Iraq, he was attacked on three separate punitive campaigns. In 1922, a combined air-ground campaign forced his escape to Persia and dispersed his followers.¹⁰ Success, however, was fleeting. Soon after the ground troops had left Sulaimaniya, Mahmud returned to stir the pot once again. In 1924 after persistent government warnings, the RAF bombed his personal headquarters in Sulaimaniya and once again he fled to the hills.¹¹ In the years that followed, there had been hope that Mahmud would end his feud with the British and Arab governments in Iraq. But Mahmud used the years to build up more forces and in 1930 he led these forces across the Persian border with the goal of detaching Kurdistan from Iraq. Most British ground forces had left the country by 1930, and the RAF along with Iraqi Levies pursued Mahmud once again. In 1931 Mahmud surrendered, was taken into British custody; and subsequently flown to a prison south of Baghdad.

In Southern Iraq different tribes had been unruly at different times due to two persistent causes: an initial lack of governmental concern for the whole Euphrates area and the constant agitation of the Nejd tribes.¹² The causes for this internal unrest appear well founded on the first point. In the first years of the air control mission, the priority was definitely to the north of Baghdad—over six air campaigns were directed against troublemakers in either Kurdistan or Mosul. It was not until 1924 that the RAF conducted any show of force operations into the southern region. On the second point, the British government allowed the Nejd to go unchecked until 1929, by 1930 the British had finally exerted enough pressure on Ibn Saud to fix the Nejd tribe problem.¹³ Ibn Saud had been subsidized by the British to fight pro-Turkish forces of Ibn Rashid in 1916 and the Sultan of Nejd in 1922; he later defeated the Hejaz and captured Mecca in 1924 uniting the Hejaz and the Nejd as Saudi Arabia. Soon thereafter, he became both King and Imam. The Nejd was Ibn Saud's responsibility and airpower appears to have hastened his decision in 1930 to take action

against the troublesome Nejd for fear that if he did not, he would be bombed.

The central lessons of these efforts were codified in scores of after-action reports from each operation. The best source of that information is in the major Iraq command reports which normally covered the period of an air operations center (AOC) command time—each about a two- to three-year period. In asking the central question as to the sources of doctrine, it is important to start with what the various air commanders said.

The Source of the Original Air Policing Doctrine

Soon after Salmond took command of the Iraq theater in 1922, he began to develop the air policing and control principles upon which his command would operate. The formalization process took almost two and one-half years, but by 1924 Salmond's notions were published in an Air Ministry document, *Note on the Method of Employment of the Air Arm in Iraq*. Prior to this publication, air commanders within Iraq had been following Salmond's guidelines as to the conduct of their air operations—which were exactly the same as the formal version of 1924.¹⁴ These principles were actually more policy oriented than they were operationally oriented, and from an air commander's view would have been considered constraints on air actions.

Accordingly, in other numerous memoranda during the period various tenets would be outlined. Salmond's Air Staff Memorandum, number 16, issued in 1924 is the most significant of this kind. In it he outlined several key ideas on the tactical use of airpower. These ideas persisted throughout the interwar period, but undergo constant modification and revision. The main Salmond principle concerned the mechanism used to coerce tribesmen into submission—the principle of interference. This principle is first described in 1924.¹⁵ Salmond suggested that there are only three possible coercive mechanisms: damage, morale, and interference. "It is commonplace here that aircraft achieve their result by their effect on morale, by the material damage they do, by the interference they cause to the daily routine of life and not through the infliction of casualties."¹⁶ The goal of the interference concept is to disrupt the normal, daily tribal routine because its effect is to keep someone from doing something as opposed to keeping something out of an area. Tribesman cannot stay in their homes and perform their normal duties because of air action, thus the interference principle suggests that *the greater the interference, the greater the coercion*.

"A tribe that is out for trouble is well aware when the patience of Government has reached breaking point; and negotiations inevitably end in what is in effect an ultimatum of some form or other. Complete surprise is impossible and the real weight of air action lies in the daily interruption of normal life which it can inflict, if necessary for an indefinite period, while offering negligible chances of loot or of hitting back. It can knock the roofs of huts about and prevent their repair, a considerable inconvenience in winter time. It can seriously interfere with ploughing or harvesting—a vital matter, or burn up the stores of fuel laboriously piled up and garnered for the winter, by attack on livestock, which is the main form of capital and source wealth to the less settled tribes, it can impose in effect a considerable fine, or seriously interfere with the actual food source

of the tribe—and in the end the tribesman finds it is much the best to obey government.”¹⁷

The Cause for Revision

When comparing this period with the 1920 Somaliland period it is apparent that the notion of “deep attack” had been modified. The principle of interference suggests that not only can airpower attack deep into the heart of the hinterland, but it can do so with persistence that can effectively interfere with the goings on of a tribal community. This represents a doctrinal shift because persistence is more associated with operational change than with technological change, even though increasing fuel capacity is an important contributing factor. Ultimately, however, the ability to persist depends on the numbers of aircraft involved and the manner in which they are employed. The principal aircraft used in Somaliland was the DH 9A and this same aircraft was used in Iraq along with other comparable aircraft. Why this occurs can be found partly in the early Iraq experiences.

In early September 1922, in an effort to curb the political uprisings near the northern Iraq-Turkey border, direct action was taken against Koi Sanjak and other small communities where Turkish detachments were located. After numerous leaflet warnings were ignored, an air attack was launched on 30 September. Persistence was considered key because Turkish soldiers had developed rather effective coping mechanisms—shelters, early warning, and dispersal. So, in order to rid the area of the Turks it became necessary to influence the surrounding communities. “This attack was continued throughout the first week of October on this and other villages . . . with the result that the Turkish detachment was forced to leave the town, and a Political officer, with a police guard, was enabled to enter without firing a shot.”¹⁸

In a further explanation the report says that, “Air action . . . has taken its effects not by inflicting casualties but mainly by its effect on morale, by damage to material and by its power to inflict very serious inconvenience for an indefinite period.”¹⁹ The whole notion appears to be a response to the indigenous coping mechanisms. No longer did tribes immediately capitulate upon the single attack. But the methods prescribed in Iraq in terms of persistence neutralized the indigenous coping mechanisms. “It has sometimes been said that the effect of air action upon the tribesmen, at first very great, rapidly wears off as he comes to realize that the number of casualties caused by it is small. It can be emphatically stated that the reverse has been our experience in Iraq . . . familiarity has increased its power.”²⁰

The cumulative consequences of air persistence created a nuisance factor that effectively interfered with daily life. Accordingly, the doctrine of interference countered the indigenous response to bombing. During the two-year period of the first Iraq Command Report, October 1922–April 1924, air action never had to be taken twice against any defender, except for the special case of Sheik Mahmud. The need to modify the deep attack method in Somaliland to the doctrine of interference is reflected largely in

the official command reports. A large amount of material in service and institution journals supports the modification as well.

Derived Doctrine in the Professional Journals

The notion of interference found its way into many professional journals such as the *Royal Air Force Quarterly* and the *Journal of the Royal United Services Institution*. Sir John Bagot Glubb, a noted expert on Arab territories and a former Imperial Army officer suggested early in his career that indigenous coping mechanisms could be overcome by the persistent and forceful application of airpower.

Aircraft do not, as a rule, inflict very heavy casualties. Their tremendous moral effect is largely due to the demoralization engendered in the tribesman by his feelings of helplessness and his inability to reply effectively to the attack . . . the enemy must be given no rest once the operations have begun. A continuous series of raids at irregular intervals by day and night must be carried on, until resistance is broken.²¹

Flight Lt C. J. MacKay won the Royal Air Force Gold Medal in 1921 for his prize essay, *The Influence in the Future of Aircraft upon Problems of Imperial Defense*.

Surely the moral effect of aircraft on the savage mind supplies the means of achieving economy without loss of efficiency on the land frontiers of the Empire. Aircraft possess several advantages over hitherto accepted methods of imposing England's will on her tribal enemies . . . and exposes the enemy's homeland to consistent attack; no matter how many fighting men he puts in the field he is powerless to protect his villages, his cattle, and his corn.²²

By 1928, Wing Cmdr R. H. Peck describes how air attack will take time to affect its most severe punishment. He clearly makes the argument against damage and for interference. "Air action does most definitely neither seek its effects nor secure them by the casualties it inflicts. It therefore takes a certain time, as a blockade would take for its pressure to be felt."²³

Summary Hypothesis

Air policing doctrine changed because indigenous response changed. The tribal coping mechanisms had to be overcome. The interference principle was based on the view that aircraft could control events on the ground in certain environments. Interference was largely responsible for separating Sheikh Mahmud from his followers on three different occasions. Although the Sheikh's "will" seems relatively intact, his followers' morale was a target; and it was successfully attacked by interfering with the daily tribal routine. In each case Sheikh Mahmud had to flee to save himself. The trend is clearly away from damage, especially in terms of casualties.

Notes

1. David E. Omissi, *Airpower and Colonial Conflict: The Royal Air Force 1919-1939* (Manchester, U.K.: Manchester University Press, 1996), 20.

2. Keith Jeffery, *The British Army and the Crisis of Empire 1918-22* (Manchester, UK: Manchester University Press, 1984), 147. This declaration was the result of a maturation of the Sykes-Picot Agreement of 1916.
3. David Fromkin, *A Peace to End All Peace: Creating the Modern Middle East 1914-1922* (New York: Henry Holt and Co., 1989), 449-54.
4. "Role of the RAF in War and the Strategical use of Airpower, Part Four: Operations 1919-1939," *R. C. A. F. Bulletin*, no. 10 (London: Air Ministry, May 1943): 2.
5. Ibid.
6. Ibid.
7. Ibid.
8. Ibid.
9. Ibid.
10. Robert Jackson, *RAF in Action* (Dorset, England: Blandford Press, 1985), 20.
11. Sir John Salmond, 1924, Air Staff Memorandum No. 16, correspondence file in AIR/338, Air Ministry Papers, Public Record Office, Kew, London.
12. Ibid.
13. Ibid.
14. Note on the Method of Employment of the Air Arm in Iraq 1924, in AIR 5/338. Document has notes affixed upon it that suggest it is not a new concept. Commanders have been following the guide for months prior to the 1924 print date.
15. Salmond, correspondence file in AIR/338.
16. Ibid.
17. Ibid.
18. *R. C. A. F. Bulletin*, No. 10, 4.
19. Ibid.
20. Ibid.
21. J. B. Glubb, "Air and Ground Forces in Punitive Expeditions," *Journal Royal United Service Institution (JRUSI)* 71, no. 483 (August 1926): 782.
22. C. J. MacKay, "The Influence in the Future of Aircraft upon the Problems of Imperial Defence," *JRUSI* 67, no. 466 (May 1922): 309.
23. R. H. Peck, "Aircraft in Small Wars," *JRUSI* 73, no. 491 (August 1928): 542.

Chapter 5

Aden: The Mature Air Policing Campaign

Aden is an excellent air policing historical marker for two reasons. First, in 1934, things were not all quiet in Aden and the RAF was still busy controlling unruly tribes within the Protectorate. The Subehis in 1929 and the Queteibis in 1934 were internal policing challenges for the air force. Second, air control had been adopted in 1928 and tactical doctrine had matured by 1934. A great deal had been learned from the border conflicts with the Zeidis who lived in the adjacent territory of Yemen and followed the guide of their leader the Iman of Yemen. That conflict, which was more oriented towards the concept of a small war, had taught the value of *persistence* and *shock value*. These notions would eventually lead to the development of a new technique of "inverted blockade." The same research questions will be asked of these periods that were used previously. Consequently, how the RAF arrived at inverted blockade is as important as its success or failure in Aden.

Background

The British had governed the city of Aden since 1839. Its interests in the area were the naval establishments Britain had maintained for almost a century.¹ Since the first ship landed there, Britain had fought tribal Arabs and the Turks to a successful conclusion.² After the Great War they struggled with the Zeidis who finally agreed to terms in 1934.³ During the latter part of the 1920s, the problems of internal policing came to the forefront.

The Campaign against the Subehis

In 1929 the Subehis carried out raids on neighboring tribes and threatened trade routes that crossed into Yemen. Aden's high commissioner sanctioned the use of force to punish the tribe for their offenses. The tribe had a history of being predatory and unmanageable. "For fifty years the difficulties of sending an expedition into their country had allowed the Subehis to rob and ravage with impunity . . . one month of (air) punishment . . . made them ready to accept the British terms."⁴ But the Subehis were not the only unruly clan out in the hinterland and in 1934 the Queteibis threatened the negotiated trade settlement between Aden and Yemen.⁵

In 1934 Yemen and Aden signed a treaty defining their contiguous borders and establishing a trade route through both territories. As soon as the trade routes were opened, the borders became hot spots of activity. Within months, various tribes began raiding traveling trade caravans and made a complete nuisance of themselves and put in jeopardy the treaty provisions.⁶ During this time the British paid 16 Queteibis to help police a certain portion of the route within Aden.⁷ On 21 February three of the

16 held up a caravan and murdered one of the craftsmen. The high commissioner of Aden ordered the perpetrators arrested. But enforcement was difficult due to the stubborn response of the Queteibi tribe. The Queteibis became increasingly defiant during the latter part of February. By March, the high commissioner ordered the air force to take action.⁸ The RAF actions against the Queteibis are important for two reasons. First, it was one of the last major air actions within Aden until the post-World War II period.⁹ Secondly, it employed a matured notion of interference that many air officers would later call the inverted blockade method.¹⁰ This particular idea deserves a full examination.

The Source of the Blockade Doctrine

The inverted blockade was a product of evolution. In 1928 Aden was supplied only one RAF squadron, a section of armored cars, and a small body of native Levies. Owing to their limited resources, the task against the Zeidis required the most prudent use of airpower. Meanwhile in Iraq, the RAF had experienced problems in turning over the government to the Iraqis. The transition theme was an issue throughout the empire. Those air commanders having charge of their theaters paid exceptionally close attention to the issue and understood that building strong local relationships was vital to British success. The British perspective vis-à-vis their Imperial environment had changed from the 1920s. In large measure the new British concern was how to transition governments to support themselves.¹¹ In an article published in the *Royal Air Force Quarterly*, Capt A. P. C. Hannay described the increased sensitivity as the "personal touch" technique. "Flights abroad are not infrequently used for the purpose of assisting in maintaining that . . . personal touch."¹² He went on to say that, "This is done by means of visits to outlying districts, flights for the local emirs . . . sometimes errands of mercy. . . . In short, sound propaganda . . . that could never be achieved by any other method."¹³

Another trend leading to the development of the inverted blockade was the realization that the level of violence affected the peace afterwards and in a Royal Air Force Historical Bulletin in 1943 the official doctrine described is "Control without Occupation."

"On various occasions . . . there were incidents that involved air action, but there were far more occasions on which the mere threat of it produced the desired result without the need to give effect to it. In general, law and order was preserved with a large measure of success, and the more peaceful tasks of the RAF were moreover of great benefit to the country . . . political and medical officers were enabled for the first time to pay frequent visits to all parts of the Protectorate. . . . Indeed it was found that this system of "control without occupation" only possible through the medium of airpower, brought the authorities into a closer and more friendly relationship with the tribesmen than had existed hitherto."¹⁴

Turning to the air campaign against the Queteibis will help describe how and why the inverted blockade is used. This form of blockade was aimed at producing a change of heart in the offenders by the exercise of the minimum amount of force. But from the outset we need to clarify the terms. The overriding doctrine appears to be the notion of control without

occupation.¹⁵ It incorporates the principle of the minimum use of force as well as a focus on political effects versus the damage effects of bombing. The inverted blockade method or tenet suggests a manner by which the employment of force can be directed to minimize its violence and maximize its results. It appears as a subset to the broader control without occupation doctrine.

The Air Campaign against the Queteibis

During early March 1934, frequent requests were made to the Queteibis to turn over to the local magistrates the perpetrators of the before mentioned crime. The requests were continually ignored. On 19 March, the government warned the tribe of an impending air bombardment, but the Queteibis ignored the warning. On 21 March another warning suggested that within 48 hours their village, crops, and food stores would be bombed. This time most residents fled, but the tribe did not comply with the original order. Air action began on 23 March and continued for eight days. The bombing ceased in early April and the following leaflet messages to the tribe tell the story.

6 April—

Whereas information has reached us that certain people are returning to their homes in Queteibi territory by night, you are hereby warned that it is not advisable for such people to do so and that they do so entirely at their own risk.

16 April—

We are informed that some of your men have been killed as well as some of your animals. The Resident and Commander-in-Chief have told you before that if you do not obey his orders you must keep yourselves and your animals right away from your village and fields. Also you have been warned not to approach or touch any unexploded bombs since it is dangerous to handle them. There is no change in these orders. Those who have been hurt have disobeyed and their deaths are their own fault. It is better to comply with the terms and live in peace but until you do so, be warned by their fate. Keep away from your homes and fields and do not touch any bombs.

8 May—

The Amir has intervened on your behalf . . . to make it easier for you to comply . . . aeroplanes will remain over your country but will cease attacking you for two days . . . air attacks will resume depending on (your compliance).

21 May—

As you have now complied to the Resident's satisfaction with the terms of his order issued to you on the 3rd of Mar 1934, the bombing of your territory will now cease and you and your subjects are allowed to return to your territory and cultivate your farms. . . . I am to say that the usual friendly relations between the Residency and the Queteibis have now been resumed and it is hoped that they will continue.¹⁶

Further proof that the principle of minimum use of force was at work is an analysis of the ordinance used during the entire air campaign. The air commander had four munition options—230, 112, 20, and five-pound bombs. The five pounds was actually a bomblet that made a large sound but did an insignificant amount of damage. During the entire period over 28,000 bombs were dropped—this appears a significant number until further evaluation reveals the number in each category.

TYPE	#	Apprx WGT
230	404	4 tons, 2 cwt
112	111	5 tons, 11 cwt
20	1716	15 tons, 6 cwt
Bomblets	26,386	3 tons, 14 cwt

Extracted from the Report of Operations Against the Queteibi Tribe from 22 March 1934 to 21 May 1934.¹⁷

Two observations are presented here. One is that the shock value is greater than the damage caused by bombing. Another is that the persistence factor of the attack is fairly high. Dropping over 28,000 bombs in a matter of a week computes to about 166 bombs per hour. Bombing did cease, however, for about six hours nightly. Obviously the weapons bark was louder than its bite and this is completely consistent with the notion of minimum use of force.

The inverted blockade technique required both a targeting concept and a constant dialogue with the enemy, which was accomplished through the use of leaflets. Ten of these leaflet drops were conducted during the campaign.¹⁸ To keep people away from their homes you must target certain areas that make it dangerous for them to return, while simultaneously telling them that you have done that. A persistent attack tends to reinforce the effort by keeping the tribesmen away from their homes, fields, and supplies. In effect, the tribesmen are blockaded from their normal life.

Summary Hypothesis

The clear trend called for greater precision in the employment of airpower. Just dropping bombs on targets was not all that was required. The precision was not so much in the actual weapon delivery as it was in the operational coherency of the overall air campaign. The inverted blockade called for the greatest precision in airpower because its effects were cumulative, and in order to produce the desired effects, persistent, and forceful airpower had to be coherently applied. The development of tactical doctrine from deep attack to interference and finally to the inverted blockade did not happen overnight. The process took about eight years. The trigger mechanism was indigenous response.

Another important trend is the increasing amount of leverage that airpower could apply. Air commanders naturally wanted to gain the maximum result from the minimum cost. J. F. C. Fuller calls this particular desire the "law of economy of force," and suggests that it is the primary principle of war.¹⁹ Not only did air commanders want to minimize bomb damage, they constantly looked for ways to demonstrate airpower without inflicting any damage. This took the form of fly-overs and other shows of force. The Fuller principle appears operable especially in the more mature phases of air policing in Aden.

Notes

1. R. J. Gavin, *Aden Under British Rule 1837-1967* (New York: Barnes and Noble, 1975), 1-3.

2. Ibid., chaps. 1 and 5. The first British ship that landed was actually shipwrecked and an attack by the local Arabs was the first contact that was made. In Gavin's work chaps. 1 and 5 conclude with the notion of British success.
3. J. L. Vachell, "Air Control in South Western Arabia," *Royal Air Force Quarterly* 2, no. 1 (January 1931): 6. At the time of the article the conflict with the Zeidis had not yet concluded—but the author says that Aden is as safe from external attack as it has ever been—that was in 1930. With the negotiated treaty of 1934, his conclusion proved warranted.
4. "Role of the RAF in War and the Strategical use of Airpower, Part Four: Operations 1919–1939," Aden, Iraq, *R. C. A. F. Bulletin*, no. 10 (London: Air Ministry, May 1943): 1.
5. Ibid., 2. The settlement called for each country to police their own territory and provide for safe travel along the trade route. A breach of that safety would certainly threaten the treaty because the Iman of Yemen was already a bit skeptical of the treaty's conditions.
6. Report of Operations Against the Queteibi Tribe from 22 March 1934 to 21 May 1934, Air Ministry Document in Air 5/1299.
7. Ibid., iv.
8. Ibid., v.
9. Gavin, chap. 11.
10. *R. C. A. F. Bulletin*, no. 10, 2.
11. Anthony Clayton, *The British Empire as a Superpower 1919–1939* (Athens, Ga.: University of Georgia Press, 1986), 251–52. Clayton's basic theme is that Britain had begun a rearmament period in the midthirties requiring a disengagement from their many extensions of their empire. The goal of Iraqi occupation had always been the transition of power.
12. Capt A. P. C. Hannay, "Empire Air Policy," *Royal Air Force Quarterly* 1, no. 4 (October 1930): 645.
13. Ibid.
14. *R. C. A. F. Bulletin*, no. 10, 2.
15. Ibid.
16. Air Ministry Document in Air 5/1299.
17. Ibid., 17.
18. Ibid., 35.
19. J. F. C. Fuller, *The Foundations of the Science of War* (London: Hutchinson and Co., 1925), 194–207. Fuller offers eight principles of war of which "economy of force" was one. The primacy of this principle is suggested by Fuller's citing of Herbert Spencer's view that force is the "ultimate of ultimates."

Chapter 6

A Summary of Doctrinal Tenets

Two types of tenets characterized the evolution of British air policing doctrine during the interwar period. One type was axiomatic, establishing the necessary preconditions for air policing and is expressed in this study as primary tenets. Other tenets described actions that served to multiply airpower effectiveness or enhance it; these were enabling tenets. Taken as a whole, primary and enabling tenets reflect the specific understanding air commanders had of their air policing experiences during the interwar period. Accordingly, an in-depth focus on the primary and enabling tenets of the British air policing experience is warranted.

The Primary Tenets

There are three primary tenets associated with air policing doctrine: legal mandate (authority), benign environment (situation), and civil order (objective). Each describes a necessary precondition for air policing. Individually, each asserts that the RAF air policing operations depended on their descriptive principle. Cumulatively, they represent the underlying pillars upon which air policing functioned. Each serves to answer the question: Upon what does air policing depend?

Tenet 1: Air Policing Depends upon a Recognized Legal Mandate (Authority)

In policing operations, military force normally served as an adjunct to an existing civil police force. Each was governed by a state's internal political authority. Additionally, the state maintained some legal connection to Great Britain. Consequently, there are two types of legal authority involving military action. One considers the external law and the other considers a state's internal law. Internal law is the constituted authority within a state. The Gwynn typology defines internal law by describing three different legal conditions under which military force may be required (within a state) to act:

- (a) When martial law is proclaimed or is in force . . .
- (b) When the civil power retains its independence but co-operates with the Army . . .
- (c) When the Army reinforces the police in giving effect to the ordinary law.¹

In Iraq, Great Britain had a "mandate" to govern the territory. The legal basis was the Treaty of Versailles. David Lloyd George as prime minister had the authority to place the RAF in military command of Iraq. Sir John Salmond as air officer commanding had charge of all military forces there, but he reported to the High Commissioner of Iraq, Sir Percy Cox. Thus, the authority to conduct air policing is found in two legal sources, internal and external to the state. The civil-military relationship is an important issue because the authority to conduct air policing always originated from a local civil source; for the whole country of Iraq the source was the High Commissioner, within particular regions inside of Iraq; the source was the regional political officer.

External law is international law, which is the primary venue for treaty law. "Treaties . . . derive their binding force from a states' initial agreement to be bound."² Other sources of international law are custom and a state's declaratory policy. They do not, however, have the same importance as does law derived from a treaty.³ Versailles stipulated the mandate which provided the legal authority for air policing in Iraq. In Aden, the legal source was the first colonial acquisition of Queen Victoria in 1839.⁴ In Somaliland, the sources of authority were the partitioning treaties with France, Italy, Ethiopia, and the Somali tribesmen. The British in their establishment of the Somaliland Protectorate of 1887, codified these various treaties.⁵

Tenet 2: Air Policing Depends upon a Benign Operational Environment (Situation)

The conduct of an air policing campaign depends upon the rapid, flexible, and persistent use of airpower toward the political objective. Without the advantage of a benign environment, airpower is limited in the effects it can produce. In Somaliland, Iraq, and Aden, the British encountered no direct air opposition and only minor surface-to-air fire from the occasional tribal rifle. Aircraft operated mostly at will over hostile territory. Hostile enemy fire could be quickly countered by a temporary increase in aircraft altitude.

This tenet does not suggest that an air policing campaign cannot be conducted without the requisite benign environment, but it does explain the limitations that such a campaign would face if it had to confront a sophisticated ground-to-air threat. In a contemporary sense, an effective counterair campaign along with an effective defense suppression campaign could be combined to produce the necessary benign environment. The analogy of the city policemen is applicable here. If a policeman does not have a free reign on the territory being policed, then his effectiveness will decrease. He must constantly weigh self-defense measures against law enforcement measures. The more energy required to provide the minimum defensive security, the less energy is applied to law enforcement. So it is also true for air policing.

Tenet 3: Air Policing Depends upon the Objective of Civil Order (Objective)

The principle of the objective is an established tenet in warfare.⁶ Military objectives logically flow from policy objectives, this normally requires a translation of policy into a specific military objective. Accordingly, the specific purpose of military force in policing is threefold: to clear the path for civil order, to restore civil order, or to maintain civil order. Civil order is the defining mechanism. In Somaliland, ridding the territory of the Mad Mullah restored civil order. In Iraq, civil order was never lost, but air policing helped maintain it. The British attack on the Queteibis in the hinterland paved the way for civil order along the Yemen-Aden trade route. In this regard, the degree of civil order determines (war) termination. It is the objective condition for which the use of force is no longer necessary, but the associated difficulty with the objective of civil order is in the dynamics of the political environment rather than the field of battle. Differentiating between war and peace is not an easy task.

Civil order is not a static condition and air policing must constantly adapt to its form for two reasons. First, the termination point is not a military condition but a political condition. Second, the concept of civil order is variable. In Aden, the campaign against the Queteibis was based primarily on the notion of precedent. The fear was that the trade routes between Aden and Yemen would be terrorized in the future. Civil order existed at the time and the territory was relatively peaceful at that time, and yet an inverted blockade was employed against the Queteibis to capture three criminals. The move was preemptive. Shiekh Mahmud's constant agitation in Kurdistan upset civil order and each campaign against him was reactive. In both cases military operations supported the maintenance of civil order. It is the political center around which all actions take place. Consequently, air policing depends on the objective view of civil order because the character of the air campaign will be bound by its limits.

Enabling Tenets

There are three enabling tenets that serve to enhance air policing campaigns: political targeting, coherence, and leverage. Taken cumulatively or individually, they describe certain actions that increase the overall effectiveness of an air policing campaign. Specifically, they answer the question: How must airpower be directed in order for air policing operations to be effective?

Tenet 4: Airpower Must Be Directed at Producing Political versus Physical Effects (Political Targeting)

There are two reasons that airpower should always be focused on producing political effects rather than physical effects caused by bomb dam-

age. Most important is the political requirement favoring the minimum use of force. The second reason takes the perspective that airpower in an air policing role is more a vehicle for communication than for a weapon of destruction. Bombing naturally plays an important role, but only to the extent that it conveys a seriousness about a present condition. Damage is the controlling variable and airpower application controls the amount of damage. Other tenets play a large part in justifying political targeting over physical targeting; leverage and coherence drive the air planner to ask: What will be the political gain from the destruction of a target? What will the recalcitrant think? How well the target is destroyed is of little consequence to the air planner. Airpower like other military means is a potentially violent form of communication. Understanding this first enabling tenet, naturally leads to a discussion of coherence and leverage.

**Tenet 5: Airpower Must Coherently Apply to all
Government Efforts Directed against the Recalcitrans
(Coherence)**

The principle of coherence is important in air policing for two reasons. First, coherence acts as a balancing mechanism between the tension associated with ends and the tension associated with means. It serves to pull the ends-to-means relationship together in a vertical fashion. Secondly, it serves as a reminder that military force is but one of many tools a government has at its disposal. The list may include the full range of social, economic, or political mechanisms. Coherence should act as an orchestrating agent for the many tools of government operating in a horizontal manner.

For Great Britain, air policing came about at a time of great need. In a strategic sense it married Britain's Imperial desire with her limited resources because it was cheaper than the alternatives. This theme is common in air policing literature. But there is another argument at the operational level of war that has been up to now neglected by the literature, namely operational appropriateness. Besides being costly, the punitive land campaign is simply not appropriate for most policing challenges. The analogy of "using a hammer to kill a gnat" appears appropriate here. Airpower was so flexible in comparison to a ground campaign that levels of violence could be controlled by political authority. Airpower simply put more arrows in the politician's quiver. The land campaign was similar to an on-off switch and airpower resembled a rheostat. Air commanders could increase pressure on the recalcitrans by dropping more and bigger bombs, more aircraft could be added to the attack package or bombing could be conducted in a persistent manner. This operational variance was all possible depending, of course, on physical limitations at the time.

Coherence should act as a sort of gravitational glue holding both horizontal and vertical dimensions of government actions together. All actions must be fixed around some objective center. This is the underlying mechanism behind the inverted blockade, air commanders using airpower as a mass communication tool and this is all the more reason that military

action be coherently applied. One hand must know what the other is doing; force must be applied appropriately, within the means and for the ends described.

**Tenet 6: Airpower Must be Directed to
Obtain the Maximum Political Effect with the
Minimum Military Cost
(Leverage)**

There are two principal reasons why effective air policing requires air planners to consider operations beyond target destruction to increase the leverage between military action and political gain. First, damage has only a limited communicative capacity. Second, the minimum use of force requires a damage-limiting campaign. Throughout the interwar period, air commanders considered and used many different types of "show of force" measures to achieve their ends. These actions ranged from fly-overs to bomb-dropping demonstrations. The mechanism that appears to drive the maximization of effect is the communication of capability. By demonstration, air commanders reasoned that the enemy would think twice about getting out of line for fear that they would become targets. Consequently, some damage was always necessary to maintain credibility and yet too much damage would engender negative indigenous response. This dilemma as to the correct amount of force used is precisely why the physical effects of airpower are secondary to the political effects.

J. F. C. Fuller views the "law of economy of force" as the preeminent one in war.⁷ His argument is based on the view that most military history reveals that war has been an instrument of waste. Accordingly he says, "War is not governed by chance, but by law, and the punishment for disobedience is waste."⁸ His view appears to be a contradiction to the Clausewitzian notion of chance in war. But if you consider Fuller's comments as prescriptive then the contradiction is resolved. Fuller's point is that the commander's central problem in war is the rational distribution of force—increasing leverage is the goal. Carl von Clausewitz and Fuller would apparently agree that waste is the result of the irrational distribution of force. This is precisely why air policing must leverage military action against political gain in the wisest manner. The preference for the show of force was an obvious attempt in that regard. Indeed the origin of air policing proves the point from a strategic sense.

After the Great War, Britain faced a difficult challenge in fulfilling new international commitments with diminishing national resources. Air policing's origin was due in large measure to this particular context. Air policing as opposed to Imperial Army policing offered significant cost reductions. "The pre-1939 campaigns revealed how little air operations cost in comparison with traditional ground-force operations having similar goals and outcomes. Cost-effectiveness was, in fact, one of the leading arguments for creating a peripheral war capability in the RAF in the interwar years. The total cost of RAF operations in Iraq, for example was just

£8 million, whereas the War Office estimated a cost of £20 million for ground operations. . . ."⁹

The imperative called for air policing to do the job of an army with less financial resources. The Trenchard notion of control without occupation was professed as early as 1921 during the Cairo Conference. The history of air policing and the development of tactical doctrine reflect that particular strategic thought—getting more political bang from the military buck. The notion was adopted at the operational level as well; the concept of "bombing for effect" is the codification of the principle of leverage.

Summary

The primary tenets of authority, situation, and objective along with the enabling tenets of political targeting, coherence and leverage must be thought of as a whole to fully grasp the many lessons of the British air policing experience. But they are wholly different in their purpose. The primary tenets describe the necessary preconditions for an air policing campaign; while the enabling tenets prescribe certain proven measures affecting the overall effectiveness of air policing. The former answers the question: Upon what does air policing depend? The latter asks; How must airpower be directed in order for air policing to be effective? Both serve the air planner well.

The first question requires air planners to consider feasibility: Is air policing a realistic military option? Sensitivity to the preconditions of air policing doctrinal postulates is most assuredly a good place to start. Air policing is a form of law enforcement and it naturally requires some kind of legal authority. Additionally, law enforcement and air policing must proceed on the basis of some form of civil order and on some degree of environmental order. If the policeman is to police there must be an adequate degree of calm in his operational medium. Airpower differentiated itself from ground power because it literally rose above immediate threats on the ground. This allowed it to be used in its most effective manner.

From the questions of feasibility, the air planner must make the next leap to employment. The next family of questions naturally deals with how to employ airpower for its most effective impact. Air commanders realized that damage was sometimes required, at other times noise was required, and at other times persistence was the call of the campaign. Political targeting is the conceptualization of airpower as a form of communication and this is exactly the reason that the timing, tempo, and overall air choreography is vital to the ultimate political objective—air policing will always be more than target kill. If the amount of destruction is a characteristic of target kill then coherence is certainly an important factor in political targeting and this is the primary reason that a leaflet campaign always preceded the dropping of bombs. Perhaps the most resounding lessons of the British experience are to be found in the combination of primary and enabling tenets that naturally require an appropriate mixture of prescription with insightful description.

Notes

1. Charles W. Gwynn, *Imperial Policing* (London: MacMillan and Co., 1936), 16.
2. J. G. Merrills, *Anatomy of International Law: A Study of the Role of International Law in the Contemporary World* (London: Sweet and Maxwell, 1981), 3.
3. Ibid.
4. R. J. Gavin, *Aden Under British Rule 1837-1967* (New York: Barnes and Noble, 1975), 1; citing *Times* (11 March 1839): 4, column c and 3, column e; and *Bombay Times* (20 February 1839): 113.
5. I. M. Lewis, *A Modern History of Somalia: Nation and State in the Horn of Africa* (London: Longman Group, 1980), 41.
6. Carl von Clausewitz discusses the "military objective" flowing from policy in his famous dictum, "War is an extension of politics by other means." Additionally, John Slessor discusses his view of a static "national object in war to overcome the opponent's will." He states further that, "in a land campaign the primary objectives will always be the enemy land forces." C. E. Callwell more accurately describes a dynamic objective in his discussion of small wars: "The selection of the objective in a small war will usually be governed in the first place by the circumstances which have led up to the campaign. Military operations are always undertaken with some end in view." Even Antoine Henri Jomini refers to political objective points in his discussion of the different classes of decisive points and admits, "they play a great part in most coalitions, and influence the operations and plans of cabinets," 91.
7. J. F. C. Fuller, *The Foundations of the Science of War* (London: Hutchinson and Co., 1925), 194-207.
8. Ibid., 201.
9. Bruce Hoffman, *British Air Power in Peripheral Conflict 1919-1976*, RAND Study R-3749-AF (Santa Monica, Calif.: Rand, 1989), 115.

Chapter 7

Implications: Asking the Right Questions

The concept of using airpower to produce civil order during the interwar period is markedly different from the contemporary notion of air policing today. The former view was mostly concerned with the internal problems of state and only rarely concerned itself with external matters. Today, we think of air policing in the "Iraq" or "Bosnia" context and specifically in the maintenance of no-fly zones. The matter could be closed there because the two concepts are obviously different and we could conclude that the doctrinal overlap is nil. But a closer observation reveals some similarities. Both concepts call for the use of airpower in an activity short of major war, both are dedicated to the minimum use of force, and both seek the maximum political effect from the use of airpower.

Further similarity is evident in the strategic context, questions such as, "Can airpower do it alone?" and "Can airpower be decisive?" are applicable in both concepts. The answers may be different, but the questions appear to be the same. Ultimately, we would like to know how airpower can be coercive—how to use it to get the maximum results and how to plan to use it. Some questions will always be asked that have no answers, but asking the right question is the first key to success. The British experience may not answer the contemporary questions, but it will most assuredly help us to ask the right questions for today.

In 1978 Philip Crowl offered a host of important questions that every strategist should always ask in his essay: *The Strategist's Short Catechism: Six Questions Without Answers*.

1. What is the policy goal of the proposed military action?
2. Does the proposed military strategy meet the desired objective?
3. What are the limits of military power?
4. What are the alternatives to the use of force?
5. How strong is the homefront?
6. How does the present differ from the past?¹

Crowl insisted in his essay that the strategist should learn from the mistakes of others because at the root of most strategy is the challenge of the intellect. "The strategic problem is essentially an intellectual problem. And before it can be addressed, it must first be defined. And to define the problem, one starts with questions."² While the preceding questions adequately address the notion of strategy, they also appear too broad for the narrow subject of tactical doctrine. To understand tactical doctrine, more specific questions are required.

Besides the six fundamental questions concerning military strategy there are three narrower tactical questions that deserve a hearing, as well as one broad question that relates to Crowl's first point. Consequently, the first question that should be asked is, What is the basis of the intended air policing campaign? Naturally, four more specific questions arise: What

is the military situation in which it will be conducted? Is there a threat to aircraft? By what authority will the campaign be conducted? What is the objective state of civil order that is envisioned by the proposed air campaign? These questions are only preliminary and there is a single but critical reason why military action cannot be justified on this basis.

Primary tenets only state the necessary conditions for air policing and attempt to answer the question: Is it possible for air policing to work? These tenets and their subsequent questions provide the framework to evaluate whether or not a true air policing condition exists. Determining the basis of a proposed air policing campaign must be the first order of business.

Then there are the questions that are purely tactical but have strategic consequences. They all have one major similarity, each asks the fundamental questions: How will it work? How will leverage, coherence, and political targeting work? How can airpower be directed for the maximum political effect with the minimum military cost? In present day Iraq is the maintenance of a no-fly zone comparable to air policing? What is missing? Does it matter?

Another question asks: How can airpower be coherently applied to all government efforts directed against the recalcitrants? Who is the enemy? Is there an enemy? This single thought should drive the air planner to consider such things as: against whom will we use airpower, what are their political connections with our state, what are the social conditions behind their recalcitrance—who are they and what are they about? When Trenchard was asked about using his air control method in Northern Ireland there can be little doubt that these type of questions caused him great concern.³ It should always be remembered that there are many things that the armed forces, no matter how powerful, cannot do and in the context of air policing the main objective is always to restore some form of civil power. An often quoted analysis of the United States role in Vietnam asks the questions: In order to save the patient is it necessary to kill him? Why, for example, would we drop more bombs on South Vietnam than on North Vietnam? Did we feel that the patient required extreme measures? How was the peace going to be affected after it was all done? Again the question of coherency should be considered because the campaign that follows may be an answer that is at odds with the intended political goal—the patient may indeed need saving.

The next question is: How can airpower be directed at producing political effects? The campaigns conducted against the Turks infiltrating the northern Iraqi border and those conducted against the mischievous Sheikh Mahmud had wholly different consequences. The former fits nicely into Gwynn's analysis of a small war, external threats warrant more severe military measures. Surely an attack on the northern city of Mosul would have been viewed as an act of war. On the other hand, Sheikh Mahmud was a citizen of Iraq and as recalcitrant as he might have been, full-scale military operations against him appear not only unjustified but overly expensive. The way the tribesmen responded to bombing changed overtime and likewise so did the RAF operational methods. In Iraq, interference bombing had a higher nuisance value than did damage bombing. Airpower was used to communicate "choice" to the tribesmen—their level

of pain was just high enough to cause them to consider their options carefully. On three separate occasions Shiekh Mahmud lost his followers because they chose a more peaceful option. Damage bombing might have inspired another reaction. In these examples, the greater the indigenous choice the greater the coercive power of air forces. The RAF clearly learned throughout their air policing experiences that they were not bombing some distant foreign enemy, but instead were dropping bombs on themselves, although the vastness of the desert hinterlands ameliorates some of the self-inflicted pain. Fly-over demonstrations were preferred over bombing missions, bombing-for-effect was preferred over bombing-for-damage. In Aden, most of the bombs had a terrific bark but little bite, and this was wholly by design.

Some Closing Comments

A 150 years ago there was no institution in the world that considered the study of airpower a viable military subject, owing even to those imaginative thinkers conceptualizing balloon flights. The history of war, however, can be dated beyond the legend of Alexander the Great by many centuries; using even the most conservative calculations that's about 3,000 years! We still derive military lessons and insight from the campaigns of Alexander. Thus, it is a ludicrous proposition to suggest there is nothing to learn from early airpower in war just because technology has gone far beyond the biplane era. Airpower has such a short history that no stone should be left unturned.

The air planner's catechism is based on the notion that the study of history will help us ask the right questions. The study of early air policing efforts may help today's air planners conceptualize and frame their problems better and more effectively. There are indeed more airpower questions to be asked and before rushing headlong into the next military challenge requiring the tactics of air policing, it would be wise to initially consider the above. After all is said and done it would then be wise to take Philip A. Crowl's suggestion and ask, OK what have I left out?⁴

Notes

1. Philip A. Crowl, *The Strategist's Short Catechism: Six Questions Without Answers* (Colorado Springs, Colo.: United States Air Force Academy [USAFA], 1978). The article was originally presented as a Harmon Memorial Lecture in Military History, no. 20, sponsored by the Department of History, USAFA, 1978.

2. Ibid.

3. David E. Omissi, *Air Power and Colonial Conflict: The Royal Air Force 1919-1932* (Manchester, U.K.: Manchester University Press, 1990), 40-41. Originally H. M. Trenchard balked at the idea, but later agreed after a National Emergency Act was passed.

4. Crowl, 89.

School of Advanced Airpower Studies

Thesis List

Available from:

AIR UNIVERSITY PRESS
170 WEST SELFRIDGE STREET
MAXWELL AFB AL 36112-6610

Voice: (334) 953-2773/DSN: 493-2773

Fax (334) 953-6862/DSN 493-6862

Internet address—<http://www.au.af.mil/au/aupress/aupubs.html>

(Order by 'T' number in parentheses)

- BARLOW, Jason B., Maj, USAF (T-15). *Strategic Paralysis: An Airpower Theory for the Present*. 1994. 91 pages.
- BEALE, Michael O., Maj, USAF (T-13). *Bombs over Bosnia: The Role of Airpower in Bosnia-Herzegovina*. 1997. 58 pages.
- BULLOCK, Harold E., Maj, USAF (T-30). *Peace By Committee: Command and Control Issues in Multinational Peace Enforcement Operations*. 1995. 80 pages.
- CHAPMAN, William G., Maj, USAF (T-19). *Organizational Concepts for the Sensor-to-Shooter World: The Impact of Real-Time Information on Airpower Targeting*. 1997. 48 pages.
- CHILSTROM, John S., Maj, USAF (T-11). *Mines Away! The Significance of US Army Air Forces Minelaying in World War II*. 1993. 52 pages.
- CICHOWSKI, Kurt A., Lt Col, USAF (T-10). *Doctrine Matures through a Storm: An Analysis of the New Air Force Manual 1-1*. 1993. 59 pages.
- CLARK, John S., Maj, USAF (T-34). *Keeping the Peace: Regional Organizations and Peacekeeping*. 1997. 67 pages.
- COSTELLO, Peter A. III, Maj, USAF (T-35). *A Matter of Trust: Close Air Support Apportionment and Allocation for Operational Level Effects*. 1997. 75 pages.
- DAHL, Arden B., Maj, USAF (T-30). *Command Dysfunction: Minding the Cognitive War*. 1998. 123 pages.
- DILLMAN, Robert D., Lt Col, USAF (T-12). *The DOD Operational Requirements and Systems Concepts Generation Processes: A Need for More Improvement*. 1993. 44 pages.
- DOUGHERTY, Stanley J., Maj, USAF (T-54). *Defense Suppression: Building Some Operational Concepts*. 1992. 62 pages.
- FADOK, David S., Maj, USAF (T-29). *John Boyd and John Warden: Air Power's Quest for Strategic Paralysis*. 1995. 55 pages.
- FISCHER, Michael E., Maj, USAF (T-50). *Mission-Type Orders in Joint Air Operations: The Empowerment of Air Leadership*. 1995. 68 pages.
- GAGNON, George R., Maj, USAF (T-43). *Air Control: Strategy for a Smaller United States Air Force*. 1993. 51 pages.
- GANN, Timothy D., Lt Col, USAF (T-14). *Fifth Air Force Light and Medium Bomber Operations during 1942 and 1943: Building the Doctrine and Forces that Triumphed in the Battle of the Bismarck Sea and the Wewak Raid*. 1993. 40 pages.
- GERBER, David K., Maj, USAF (T-53). *Adaptive Command and Control of Theater Airpower*. 1999. 108 pages.
- GUNZINGER, Mark Alan, Maj, USAF (T-4). *Power Projection: Making the Tough Choices*. 1993. 79 pages.
- HAMILTON, Robert J., Maj, USAF (T-41). *Green and Blue in the Wild Blue: An Examination of the Evolution of Army and Air Force Airpower Thinking and Doctrine since the Vietnam War*, 1993, 44 pages.
- HEWITT, William A., Maj, USAF (T-9). *Planting the Seeds of SEAD: The Wild Weasel in Vietnam*. 1993. 31 pages.

HOLLAND, Edward C. III, Lt Col, USAF (T-55). *Fighting with a Conscience: The Effects of an American Sense of Morality on the Evolution of Strategic Bombing Campaigns*. 1992. 41 pages.

HOLMES, James M., Maj, USAF (T-32). *The Counterair Companion: A Short Guide to Air Superiority for Joint Force Commanders*. 1995. 75 pages.

HUNT, Peter C., Maj, USAF (T-31). *Coalition Warfare: Considerations for the Air Component Commander*. 1998. 76 pages.

HUST, Gerald R., Maj, USAF (T-17). *Taking Down Telecommunications*. 1994. 65 pages.

LEE, James G., Maj, USAF (T-23). *Counterspace Operations for Information Dominance*. 1994. 43 pages.

LEWIS, Michael, Maj, USAF (T-22). *Lt Gen Ned Almond, USA: A Ground Commander's Conflicting View with Airmen over CAS Doctrine and Employment*. 1997. 99 pages.

LONGORIA, Michael A., Maj, USAF (T-44). *A Historical View of Air Policing Doctrine: Lessons from the British Experience between the Wars, 1919-39*. 1993. 41 pages.

MATTSON, Roy Michael, Maj, USAF (T-45). *Projecting American Airpower: Should We Buy Bombers, Carriers, or Fighters?* 1992. 34 pages.

NOETZEL, Jonathan C., Lt Col, USAF (T-7). *To War on Tubing and Canvas: A Case Study in the Interrelationships between Technology, Training, Doctrine, and Organization*. 1993. 30 pages.

PREBECK, Steven R., Maj, USAF (T-52). *Preventive Attack in the 1990s?*. 1993. 28 pages.

RAMPINO, Michael A., Maj, USAF (T-24). *Concepts of Operations for a Reusable Launch Vehicle*. 1997. 62 pages.

RYAN, Donald E., Jr., Lt Col, USAF (T-8). *The Airship's Potential for Intertheater and Intratheater Airlift*. 1993. 58 pages.

SCHOW, Kenneth C., Jr., Lt Col, USAF (T-40). *Falcons against the Jihad: Israeli Airpower and Coercive Diplomacy in Southern Lebanon*. 1995. 54 pages.

SMITH, Philip A., Maj, USAF (T-51). *Bombing to Surrender: The Contribution of Airpower to the Collapse of Italy, 1943*. 1998. 79 pages.

TORRENS, Linda E., Lt Col, USAF (T-21). *The Future of NATO's Tactical Air Doctrine*. 1997. 47 pages.

TREADWAY, C. G. C., Maj, USAF (T-27). *More than Just A Nuisance: When Aerial Terror Bombing Works*. 1998. 46 pages.

TUBBS, James O., Maj, USAF (T-26). *Beyond Gunboat Diplomacy: Forceful Applications of Airpower in Peace Enforcement Operations*. 1997. 66 pages.

WHITEHEAD, YuLin G., Maj, USAF (T-6). *Information as a Weapon: Reality versus Promises*. 1998. 52 pages.

ZIEGLER, David W., Maj, USAF (T-3). *Safe Heavens: Military Strategy and Space Sanctuary Thought*. 1998. 60 pages.

OUT OF PRINT (No Longer Available)

BASH, Brooks L., Maj, USAF (T-16). *The Role of United States Air Power in Peacekeeping*. 1994. 44 pages.

BLACKWELDER, Donald I., Maj, USAF (T-6). *The Long Road to Desert Storm and Beyond: The Development of Precision Guided Bombs*. 1993. 40 pages.

CARPENTER, P. Mason, Maj, USAF (T-27). *Joint Operations in the Gulf War: An Allison Analysis*. 1995. 89 pages.

COBLE, Barry B., Maj, USAF (T-18). *Benign Weather Modification*. 1997. 36 pages.

COX, Gary C., Maj, USAF (T-50). *Beyond the Battle Line: US Air Attack Theory and Doctrine, 1919-1941*. 1996. 51 pages.

DELGREGO, William J., Maj, USAF (T-48). *The Diffusion of Military Technologies to Foreign Nations: Arms Transfers Can Preserve the Defense Technological and Industrial Base*. 1996. 40 pages.

DEVEREAUX, Richard T., Lt Col, USAF (T-21). *Theater Airlift Management and Control: Should We Turn Back the Clock to Be Ready for Tomorrow?* 1994. 73 pages.

DRAKE, Ricky James, Maj, USAF (T-1). *The Rules of Defeat: The Impact of Aerial Rules of Engagement on USAF Operations in North Vietnam, 1965-1968*. 1993. 38 pages.

EGGINTON, Jack B., Maj, USAF (T-20). *Ground Maneuver and Air Interdiction: A Matter of Mutual Support at the Operational Level of War*. 1994. 40 pages.

EHRHARD, Thomas P., Maj, USAF (T-51). *Making the Connection: An Air Strategy Analysis Framework*. 1996. 58 pages.

FAULKENBERRY, Barbara J., Maj, USAF (T-43). *Global Reach-Global Power: Air Force Strategic Vision, Past and Future*. 1996. 48 pages.

FELKER, Edward J., Lt Col, USAF (T-34). *Oz Revisited: Russian Military Doctrinal Reform in Light of Their Analysis of Desert Storm*. 1995. 69 pages.

FELMAN, Marc D., Lt Col, USAF (T-2). *The Military/Media Clash and the New Principle of War: Media Spin*. 1993. 42 pages.

GILBERT, Silvanus Taco, III, Lt Col, USAF (T-3). *What Will Douhet Think of Next? An Analysis of the Impact of Stealth Technology on the Evolution of Strategic Bombing Doctrine*. 1993. 48 pages.

GIVHAN, Walter D., Maj, USAF (T-45). *The Time Value of Military Force in Modern Warfare*. 1996. 53 pages.

GRIFFITH, Thomas E., Jr., Maj, USAF (T-22). *Strategic Attack of National Electrical Systems*. 1994. 64 pages.

HAYWOOD, James E., Maj, USAF (T-46). *Improving the Management of an Air Campaign with Virtual Reality*. 1996. 40 pages.

HOWARD, Stephen P., Maj, USAF (T-41). *Special Operations Forces and Unmanned Aerial Vehicles: Sooner or Later?* 1996. 39 pages.

HUNTER, Roger C., Lt Col, USAF (T-38). *A United States Antisatellite Policy for a Multipolar World*. 1995. 52 pages.

KUPERSMITH, Douglas A., Maj, USAF (T-5). *The Failure of Third World Air Power: Iraq and the War with Iran*. 1993. 43 pages.

MOELLER, Michael R., Maj, USAF (T-36). *The Sum of Their Fears: The Relationship between the Joint Targeting Coordination Board and the Joint Force Commanders*. 1995. 65 pages.

MOORE, Bernard Victor, II, Maj, USAF (T-13). *The Secret Air War Over France: USAAF Special Operations Units in the French Campaign of 1944*. 1993. 50 pages.

NORWOOD, J. Scott, Maj, USAF (T-24). *Thunderbolts and Eggshells: Composite Air Operations during Desert Storm and Implications for USAF Doctrine and Force Structure*. 1994. 59 pages.

PALMBY, William G., Maj, USAF (T-44). *Enhancement of the Civil Reserve Air Fleet: An Alternative for Bridging the Airlift Gap*. 1996. 45 pages.

PELLEGRINI, Robert P., Lt Col, USAF (T-20). *The Links between Science, Philosophy, and Military Theory: Understanding the Past, Implications for the Future*. 1997. 70 pages.

PRAY, John I., Jr., Maj, USAF (T-28). *Coercive Air Strategy: Forcing a Bureaucratic Shift*. 1995. 34 pages.

RENEHAN, Jeffrey N., Maj, USAF (T-2). *Unmanned Aerial Vehicles and Weapons of Mass Destruction: A Lethal Combination?* 1997. 58 pages.

RINALDI, Steven M., Maj, USAF (T-31). *Beyond the Industrial Web: Economic Synergies and Targeting Methodologies*. 1995. 84 pages.

SCHULTZ, James V., Lt Col, USAF (T-16). *A Framework for Military Decision Making under Risks*. 1997. 59 pages.

SHUGG, Charles K., Maj, USAF (T-47). *Planning Airpower Strategies: Enhancing the Capability of Air Component Command Planning Staff*. 1996. 37 pages.

SINK, J. Taylor, Lt Col, USAF (T-25). *Rethinking the Air Operations Center: Air Force Command and Control in Conventional War*. 1994. 55 pages.

STORY, William C., Jr., Maj, USAF (T-39). *Third World Traps and Pitfalls: Ballistic Missiles, Cruise Missiles, and Land-Based Airpower*. 1995. 76 pages.

STREDNANSKY, Susan E., Maj, USAF (T-42). *Balancing the Trinity: The Fine Art of Conflict Termination*. 1996. 51 pages.

SULLIVAN, Mark P., Maj, USAF (T-33). *The Mechanism for Strategic Coercion: Denial or Second Order Change?* 1995. 63 pages.

VAZQUEZ, Donald ("Bud"), Lt Col, USAF (T-37). *Build-to-Shelve Prototyping: Undercutting Doctrinal Development*. 1995. 42 pages.

WALKER, Daniel R., Maj, USAF (T-49). *The Organization and Training of Joint Task Forces*. 1996. 45 pages.

WALKER, Scott G., Maj, USAF (T-1). *Targeting for Effect: Analytical Framework for Counterland Operations*. 1998. 86 pages.

WOLF, Franklin R., Maj, USAF (T-19). *Of Carrots and Sticks or Air Power as a Nonproliferation Tool*. 1994. 54 pages.

WRIGHT, Stephen E., Maj, USAF (T-26). *Aerospace Strategy for the Aerospace Nation*. 1994. 50 pages.

WUESTHOFF, Scott E., Maj, USAF (T-18). *The Utility of Targeting the Petroleum-Based Sector of a Nation's Economic Infrastructure*. 1994. 46 pages.